First Copy

A National Newspaper for Every Branch of the Industry

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

Vol. 11. No. 1490. Entered as second-class matter Aug. 27, 1925, Post Office, N. Y., N. Y. Under Act of March 3, 1879 NEW YORK, SATURDAY, JUNE 13, 1931 5 Cents. $12 Per Year

Youngstown Steel Makers Are Said to Be Figuring on Material for a New Ford

Parts Manufacturers Also Reported Working on Bids Which Indicate Longer and Heavier Model

YOUNGSTOWN, O., June 12.—Steel manufacturers and parts makers in this district are figuring on specifications for what appears to be a new Ford model. Requests submitted are said to have included bids on fender stock, sheets, running boards, radiator shells and similar parts. It is said that specifications indicate a longer and heavier model than the present Model A.

Some makers here assume that the requests cover plans for production of the much-discussed eight-cylinder car, but another group appear to believe that the new specifications are intended for a revised Model A.

Ford steel buying has been light for some time and there is a great deal of interest here in the present move, which it is hoped would bring important orders into local mills and factories.

Reports from Detroit have indicated that there was no immediate prospect of Ford's announcing his expected eight-cylinder job. If this is true, the requests for bids received by local manufacturers fit in with the expectation that a new edition of the Model A will be the first announcement by the Detroit manufacturer.

CHICAGO A. T. A. NAMES TIFFANY AS PRESIDENT

Chicago, June 12.—R. G. Tiffany, branch manager of the Cadillac Motor Car Company, who has filled the unexpired term of J. R. Histed as president of the Chicago Automobile Trade Association, has just been elected by the board of directors as president of the association for the ensuing year.

Other officers of the organization elected, it became known today, are: H. A. Wehmeier, vice-president and general manager of Community Motors, Inc., Oakland-Pontiac distributor, as vice-president; George H. Bird, president of Bird-Sykes Company, Graham-Paige distributor, as secretary, and Thomas J. Hay, president of Thomas J. Hay, Inc., Willys-Overland distributor, as treasurer. A. C. Faeh, general manager of the association, was again appointed to that office.

N. A. C. C. CONFERENCE OF TRAFFIC MANAGERS IN DETROIT, JUNE 23

Detroit, June 12.—Traffic managers of member companies of the National Automobile Chamber of Commerce will meet at Room 14-124 on the 14th floor of the General Motors Building here, at 9.30 a. m., Tuesday, June 23.

The special N. A. C. C. committee which conferred with railroad officials on proposed reduced commodity rates on automobile parts to meet actual and potential truck competition will report. There will be discussion on Eastern railroads' contemplated proposal of a general increase in freigmt rates in Eastern territory as well as numerous other matters affecting automobile shipping, including:

Suspension of proposed increase in carload minimum weights when closed cars over 41 feet, six inches in length are ordered by shipper and longer cars furnished. The hearing scheduled here June 9 was postponed until September or later.

Proposed cancellation of railroad loading and blocking charge of $3 per automobile when carriers perform this service.

Advisability of deferring proposed application for 5th class rating minimum 30,000 pounds, carloads, chassis, K. D., boxed, with or without seat cabs, boxed, to North Atlantic ports for export, until other important N. A. C. C. proposals before carriers are disposed of.

N. A. C. C. petition for reduction

(Continued on Page 10)

Late News Flashes

New York, June 12.—The Brockway Motor Truck Corporation has been awarded an order for fifty dump trucks of three ton capacity by the New York State Highway Commission.

* * *

Austin, Tex., June 12.—Despite protests of hundreds of motor truck owners of Texas, Gov. Ross Sterling has signed the motor truck bill which limits the load weight of trucks to 7,000 pounds, and in many other respects restricts their operation. The bill was strongly favored by the railroads.

* * *

Tampico, Mex., June 12.—Crude oil production in the Panuco and Tuxpan districts averaged 75,428 barrels daily during the week ended May 30, compared with 75,857 barrels daily in the preceding week.

S. A. E. Gathers for Important Discussion Program at Annual Summer Meeting; Expect 500

By J. RUSSELL WALSH

New York, June 12.—On Sunday the annual summer meeting of the Society of Automotive Engineers will be opened at the Greenbrier, White Sulphur Springs, W. Va. Over 500 members will participate in the meetings, which extend from Sunday, June 14, to Friday, June 19. Special trains from New York city, Detroit and Cleveland have been chartered, while many of the members will arrive by motor car and airplane. The special trains will arrive early Sunday morning, after which breakfast will be served at the hotel.

Technical sessions will commence with discussion of motor trucks and motor coaches. H. W. Alden will be chairman of the opening session, at which M. L. Pulcher, Federal Motor Truck Company, will deliver a paper, "Rating the Truck," and L. R. Buckendale, Timken-Detroit Axle Company will present "A Suggested Basis for Rating Trucks."

The discussion of motor-truck rating is extremely timely, since the industry has recognized a great divergence of opinion as regards the designation of a load-carrying capacity of trucks, many of which, while rated at the same capacity by different manufacturers, vary greatly in chassis weights, engine power developed, transmission and rear-axle construction and in many other details. Mr. Buckendale will offer a yardstick in the shape of a formula which involves the gross vehicle weight, engine torque, total gear reduction, over-all mechanical efficiency, radius of tire under load, gradient and rolling resistance as a means of rating a truck. Mr. Pulcher, in discussing the rating of the motor truck, will point out that there is a direct relationship between

(Continued on Page 8)

FOR quick dispatch of S. A. E. news this week, see

William C. Callahan

news editor of Automotive Daily News, who will be at the Greenbriar from June 13 to June 19.

News received in New York by 11 o'clock in the morning will appear in the issue of this paper distributed next morning at White Sulphur Springs. If you have a news item of any kind, see Mr. Callahan. Remember the difference in daylight saving time.

FRANKLIN TO RESUME NORMAL PRODUCTION TUESDAY; ORDERS UP

Syracuse, N. Y., June 12.—Operations will be resumed Tuesday, June 16, by H. H. Franklin Manufacturing Company with normal force of employees and daily output at same rate as maintained through early spring season.

Ten per cent. increase in unfilled orders is reported since end of May, in face of continued shipping at normal seasonal rate during interval when efficiency adjustments temporarily held up production.

Franklin car deliveries by dealers thus far in June are reported ahead of same period in May by 10 per cent.

This gain running counter to normal seasonal tendencies may indicate sustained buying at steady levels into early summer, Franklin executives say.

Current retail gains are most pronounced in higher priced Franklin line.

TODAY

Sparks from Detroit.....Page 2
Who's who at the S. A. E. meeting, Page 2
This dealer's telephone keeps service department busy .....Page 3
Editorial: "The S. A. E. Meeting," Page 4
Differential discussions .....Page 4
Calendar of coming events...Page 4
Engineering news .....Pages 8, 9
Papers delivered at S. A. E. convention .....Pages 6, 10
Delivering oils and gasoline profitably .....Page 11

REFERENCE TABLES

Cumulative May new passenger car registrations.....Pages 6, 7

G. M. SECOND QUARTER PROFIT SEEN EQUAL TO A YEAR AGO

New York, June 12.—It is believed here by usually well informed financial groups that General Motors earnings in the second quarter of 1931 will run about the same as earnings for that period of 1930.

Last year the second quarter showed earnings of $1.17 per share, and the amount for this year's second quarter is placed between $1.15 and $1.20 per share. This would bring the first half's earnings up to about $1.80 per share on the 43,500,000 shares of common stock outstanding.

It is probable that retail sales in the second quarter this year will be above the level set in 1930. In fact, the profit derived from the automotive manufacturing divisions of General Motors will probably show to better advantage than was the case last year.

Complete Technical Program Of S. A. E. Meeting

THE complete technical program for the annual summer meeting of the Society of Automotive Engineers, meeting at White Sulphur Springs, W. Va., June 14 to 19, is as follows:

SUNDAY, JUNE 14

8.30 P. M. Auditorium

MOTOR TRUCKS AND MOTOR COACHES

H. W. Alden, Chairman

Rating the Truck—M. L. Pulcher, Federal Motor Truck Company.

A Suggested Basis for Rating Trucks—L. R. Buckendale, Timken-Detroit Axle Company

MONDAY, JUNE 15

10.00 A. M. Auditorium

FUELS

A. L. Beall, Chairman

Further Developments in Determining Gum in Gasoline—O. C. Bridgeman and E. W. Aldrich, Bureau of Standards

Fuel Line Temperatures in 1931 Motor Cars—O. C. Bridgeman and H. S. White, Bureau of Standards

The Interpolation Method in Detonation Testing—D. B. Brooks, Bureau of Standards

Carburetor Design for the Fuel Research Detonation Engine—C. S. Kegerries, consulting engineer, Toledo

10.00 A. M. Ballroom

TRANSPORTATION

F. K. Glynn, Chairman

Utilization of Motor Coaches—D. A. Smith, Department of Street Railways, Detroit, Mich.

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Dealer by Means of Telephone Fills Service Dept.

Story on Page 3

Who's Who at the S. A. E. Summer Meeting

BETWEEN five and six hundred members and friends of the Society of Automotive Engineers are expected to attend the annual summer meeting of the society which opens tomorrow at the Greenbriar Hotel, White Sulphur Springs, W. Va. The list of visitors, which is complete up to Friday, already contains several hundred names. An additional list showing the names of the registrants who do not appear in this issue will appear in Automotive Daily News, Monday.

Ackerman, P. C., Timken Roller Bearing Company.
Ahlene, C. M., Borg & Beck Co.
Ake, M. E., Firestone Tire and Rubber Company.
Alden, H. W., Timken-Detroit Axle Company.
Alden, Miss Madelaine, Detroit, Mich.
Alexander, Donald, E. G. Budd Manufacturing Company.
Aldrich, Miss E. W., Bureau of Standards.
Allen, George B., Dodge Brothers Corporation.
Ames, H. L., Whitney Manufacturing Company.
Anderson, A. W., Borg & Beck.
Anderson, D. E., Bohn Aluminum and Brass Corporation.
Anderson, Earl A., National Lamp Works of General Electric Company.
Anderson, L. R., Standard Oil Company of New York.
Anderson, Roy F., Murray Corporation of America.
Anglada, Jos. A., Anglada Motor Corporation.
Apple, Vincent G., Vincent G. Apple Laboratories.
Austin, E. W., Timken Roller Bearing Company.
Austin, Mrs. E. W., Detroit, Mich.
Bachman, B. B., Autocar Company.
Baker, Wm. A., Firestone Steel Products Company.
Baker, Mrs. Wm. A., Akron, O.
Baldwin, A. J., Standard Oil Development Company.
Banks, N. C., Gear Grinding Machine Company.
Banks, Mrs. N. C., Detroit, Mich.
Barnard, D. P., Standard Oil Company (Indiana).
Barnard, Mrs. D. P., Whiting, Ind.
Bauer, Walter C., Standard Oil Development Company.
Beall, A. L., Vacuum Oil Company.
Beall, Mrs. A. L., Ridgefield, N. J.
Becker, A. E., Standard Oil Development Company
Becker, Mrs. A. E., Westfield, N. J.
Bellanca, G. M., Bellanca, Aircraft Company
Berge, Joseph, Crowner Company.
Bettle, Griscom, E. G. Budd Manufacturing Company.
Bicknell, G. M., Carter Carburetor Corporation.
Bishop, C. B., Bureau of Standards.
Blackwell, E. E., Morse Chain Company.
Blanchard, Harold F., Motor Magazine.
Blanchard, Mrs. Harold F., New York city.
Body, L. F., Dill Manufacturing Company.
Body, Mrs. L. F., Cleveland, O.
Bolles, J. H., Delco-Remy Corporation.
Boor, A., Willys-Overland Company.
Boots, E. R., New York city.
Booth, F. E., Hyatt Roller Bearing Company.
Bourke, T. N., Vanadium Corporation of America.
Bramberry, H. M., Perfect Circle Company.
Brannin, D. P., New Jersey Zinc Company.
Brede, Mrs. Beulah, Detroit, Mich.
Brede, O. M., General Motors Truck Company.
Bridgeman, O. C., Bureau of Standards.
Brink, W. S., Firestone Steel Products Company.
Broege, R. J., International Engineering Corporation.
Brodt, Burton, E. C. Budd Manufacturing Company.
Bronson, A. E., Dill Manufacturing Company.
Bronson, Mrs. A. E., Cleveland, O.
Brooks, Donald B., Bureau of Standards.
Brooks, Mrs. Donald B, Washington, D C
Brown, Gordon, Bakelite Corporation.
Brown, Horace A., Jr., Detroit, Mich.
Brown, Mrs. Horace A., Jr., Detroit, Mich.
Brown, Miss Alice G., Detroit, Mich.
Brown, R. W., Firestone Tire and Rubber Company.
Brown, Sandford, Bakelite Corporation.
Brown, Willard C., General Electric Company.
Bruce, Clarence S., United States Bureau of Standards.
Bruce, Mrs. Clarence S., Washington, D. C.
Brumbaugh, A. K., White Motor Company.
Brunn, Hermann A., Brunn & Co., Inc.
Brunn, Mrs. Hermann A., Buffalo, N. Y.
Brunn, Hermann C., Buffalo, N. Y.
Bryan, William J., Heintz Manufacturing Company.
Bryan, Mrs. W. J., Detroit, Mich.
Buchenberg, A. E., Toledo, O.
Buckendale, L. Ray, Timken-Detroit Axle Company.
Bull, A. A., Handy Governor Corporation.
Burckhalter, R. N., Michigan City, Ind.
Burnett, R. S., Society of Automotive Engineers.
Butler, W. H., Standard Oil Development Company.
Callahan, W. C., Automotive Daily News.
Carroll, E. L., Society of Automotive Engineers.
Carter, E. Robert, Fafnir Bearing Company.
Cast, J. F., Firestone Tire and Rubber Company.
Chaminade, L. A., Studebaker Corporation.
Chaminade, Mrs. L. A., South Bend, Ind.
Chandler, F. F., Ross Gear and Tool Company.
Chandler, Henry, Vanadium Corporation of America.

(Continued on Page 7)

Complete Technical Program Of S. A. E. Meeting

(Continued from Page 1)

6:30 P. M. Auditorium

DIESEL ENGINES

W. F. Joachim, Chairman

Automotive Diesel Fuels—W. H. Butler, Standard Oil Co. of New Jersey
Practical Experience With Devices for Damping Torsional Vibrations—Erich Sandner, consulting engineer, Dortmund, Germany, and J. B. Frauenfelder, consulting engineer, Philadelphia.

10:30 P. M. The Pool

Water Carnival

TUESDAY, JUNE 16

10:00 A. M. Auditorium

PASSENGER CAR BODIES

L. C. Hill, Chairman

Comfort and Interior Appointments—H. A. Brunn, Brunn & Co., Inc.
What the Body Engineer Wants in a Chassis—R. F. Anderson, Murray Corporation of America

8:30 P. M. Auditorium

PASSENGER CARS

W. C. Keys, Chairman

The Tear-Drop Car—W. T. Fishleigh, consulting engineer, Detroit
Driving High Speed Cars—J. E. Hale, Firestone Tire and Rubber Company

WEDNESDAY, JUNE 17

10:00 A. M. Auditorium

FUTURE DEVELOPMENTS

W. J. Davidson, Chairman

The Field for Synthetic Lubricating Oils—F. W. Sullivan, Jr., V. Voorhees, P. T. Oak and D. P. Barnard, Standard Oil Company of Indiana
The Case in Favor of Cars With Rear Engine Mountings—Herbert Chase, Product Engineering and American Machinist

10:00 A. M. Ballroom

STANDARDS

Arthur Boor, Chairman

Reports of the various divisions will be presented and acted upon

2:00 P. M. **Field Day**

8:30 P. M. Auditorium

SEMI-ANNUAL BUSINESS MEETING

President Vincent Bendix in the Chair

AIRCRAFT

Dr. G. W. Lewis, Chairman

Flying With the Navy—Hon. D. S. Ingalls, assistant secretary of the navy for aeronautics

THURSDAY, JUNE 18

10:00 A. M. Auditorium

AIRCRAFT ENGINES

Arthur Nutt, Chairman

Air-Cooled Cylinder Head Design—Roland Chilton, Wright Aeronautical Corporation
Recent Valve Developments—A. T. Colwell, Thompson Products, Inc.

10:00 A. M. Ballroom

CHASSIS

E. S. Marks, Chairman

The Tire Factor in Automobile Riding Quality—R. W. Brown, Firestone Tire and Rubber Company
Road Tests With the New Wabblemeter—Dr. F. A. Moss, George Washington University
Some Observations on Riding Qualities—Dr. Ammon Swope and Prof. H. M. Jacklin, Purdue University
Instrumentation as a Means for Co-ordinating Chassis and Body Design—A. F. Denham, Automotive Industries

2:00 P. M. **Aviation Demonstrations**

8:30 P. M. Auditorium

GENERAL PRODUCTION SESSION

E. K. Wennerlund, Chairman

Cost to Industry of Labor Turnover—H. L. Horning, Waukesha Motor Co.

10:30 P. M. **Grand Ball** Ballroom

FRIDAY, JUNE 19

10:00 A. M. Auditorium

ENGINES

G. C. Brown, Chairman

Oil Control in the Engine—H. C. Mougey, General Motors Corporation
Winter Starting Tests—P. J. Kent, Chrysler Corporation.
Reduction of Fan Noise and Fan Power—A. D. Gardner, Automotive Fan and Bearing Company.

SPARKS from DETROIT

Count Sakhnoffsky To Become Yank

* * *

Wedding Bells

* * *

Here's Another

* * *

Engines in the Rear

* * *

Chris Sinsabaugh—Detroit Editor

IT'S going to be M. Comte Alexis de Sakhnoffsky, U. S. A., from now on, and not a man without a country, as it has threatened to be for the last several weeks. All because the government has agreed that it is all right for the count to become an American citizen. It looked for a time as if this great automotive stylist either would have to go back to Russia and be executed as a white Russian or camouflage by crossing the river to Windsor and operate in Canada for six months. Now we are told that a kindly Uncle Sam realizes that Alexis is valuable to the automotive industry as a whole rather than to any individual concern, so he is granted the right of alien residence in the United States, with the privilege of becoming a citizen within a period of five years.

Although he has been operating in this country with a rope around his neck, so to speak, for some little time, the count was expecting he would have to go elsewhere because his time was up here in the States, all of which caused consternation over at Grand Rapids, where he has been busy for some time designing De Vaux bodies and planning stuff for Hayes Body. This latest edict, raising the ban so far as the United States is concerned, greatly relieves the minds of Norman De Vaux and W. W. Hoagland, the latter the president of Hayes Body, who regard the count as one of their aces. By the way, the count wrote a very interesting series recently for A. D. N. on body styles, and has had a finger in the pie designing bodies for concerns other than De Vaux.

* * *

WE'RE ringing wedding bells for two of our ilk—Bob Copeland, automobile editor of the Chicago Herald and Examiner, and John Bonbright of Brooke, Smith & French, and a newspaper man as it were because he has to secure publicity for Graham-Paige. Miss Julia Alice Resoner has become Mrs. Robert Copeland, and Miss Dorothy Vance, daughter of the Rev. and Mrs. Joseph A. Vance of Detroit, Mrs. John M. Bonbright.

Unusual in connection with the Copeland affair is that the bridegroom was granted the privilege by a kindly city editor of writing the story of his own wedding for his own paper. Bob was given a two-column head and plenty of space, and how he utilized it! We chuckled over the opening paragraph of the clipping sent us: "A wedding of no importance other than to those directly connected occurred in Chicago yesterday."

* * *

THANKS to the New York Times and to James O. Spearing, automobile editor, in particular, which reprinted in part the A. D. N. story about the Curtis list and how we are co-operating with the Saturday Evening Post people in the compilation of a roll call of all the American-made cars, the column has heard from still another claimant for a place in the automobile Hall of Fame. George J. Loomis, manager of the E. A. Wright Bank Note Company of New York, read the Times story, which gave due credit to the A. D. N. and this writer, with the result that Mr. Loomis has contributed the following:

"I started to build my first car in 1896. I made cars in Westfield, Mass., for several years. The first ones were single-cylinder, then two cylinder, then three-cylinder. I exhibited two-cylinder cars at the national bicycle shows before the first automobile exhibition was held."

* * *

IN Alex Johnston's editorial, "Engines in the Rear," in Wednesday's A. D. N., the chief says: "It is a mighty difficult matter to upset a standard once it is accepted by the general public. Any complete overturn of an accepted tradition must be so far better than what it would displace that the sheer force of its inherent superiority overcomes the intrenched opposition. We doubt that rear mounting for the automobile engine has this overwhelming superiority."

I'd like to contribute my bit, and in support of the Johnstonian theory hark back to the days when the industry was aborning. Gasoline, electricity and steam started from scratch in the race for public approval at that time with the electric having the shade. Any one of the three could have become the universal power for the automobile, but the public settled on gasoline and so gasoline has predominated ever since. Each one of these powers had something to recommend it, and if the public favor had selected, say, electricity, that would have been our power today.

"Give the people what they want" seems to be the creed that has made the automobile industry what it is today.

This Dealer's Telephone Keeps Service Dept Busy

Waterbury Concern Finds This Method of Contacting, Supplemented by Direct-Mail Advertising, Most Successful

A WELL-ORGANIZED telephone campaign has brought an increase of 20 per cent. in service business to the Hotchkiss Buick Company, 17 Willow St., Waterbury, Conn. Every day a girl especially assigned to the duty calls from thirty to forty Buick owners, and after thirty days letters are sent to those interviewed by telephone who failed to come into the shop. If the first letter brings no response, a second letter follows after another thirty-day period.

The telephone girl's "line" runs something like this: "You own such and such a model Buick, I believe? . . . I'm talking for the service department of the Hotchkiss Buick Company. Our records show that you haven't been in to see us for some time. Our prices on service work have recently been reduced, and I'm sure you'd like to take advantage of them . . . Have you any grievance against our concern, any matter that we may be able to straighten out?"

If the Buick owner admits to a grievance of any sort, John Miller, service manager, makes it a point to interview the owner immediately, and in most cases an adjustment can be made or the owner's feelings smoothed out. The steady increase in service volume bears witness to the effectiveness of the telephone and letter campaign, according to H. R. Hotchkiss, president.

The dealership recently cut its used car inventory by $13,000 and 71 units at the annual spring used car sale, on which heavy advertising space was employed. Among the "leaders" used were several cars offered at 99 cents down and 99 cents a week. Another stunt which attracted attention was the placing of a car in the window, with the announcement that its price would be cut $20 a day until sold. The price started at $880, and the car was sold the second day.

Three cars were disposed of at good prices through this window display during the two weeks of the sale. The sale was conducted without extreme circusy tactics, however. Every car was plainly marked with price tags and no dickering was allowed.

Uses Used Car Copy

11 CARS under $200
THE BIGGEST YET!
NASH-NEWARK INC.
AKRON
USED CAR SALE
Out in Akron, Ohio, the largest dirigible in the world is nearing completion. Right here in Newark we are engineering the biggest Used Car Sale yet.
23 CARS under $500
15 CARS at $500
2500 Mile Guarantee
BLUE SEAL Guarantee
Your Old Car in Trade
Practically Every Make & Style in our Stock
EASY TERMS Weekly or Monthly Payments
The Finest Lot of Cars We've Ever Had
Big Selection
Used Car Bargains
Used Car BARGAINS
1930 Nash Cabriolet ... PRICE $575
1929 Nash ... PRICE $669
1930 Willys "6" Sedan ... PRICE $595
1930 Nash Special "6" Sedan ... PRICE $945
1930 Nash Victoria Coupe ... PRICE $1,195
Used Car Prices Are Down—We've Put Them Down—Now Is the Time to Buy!
Under $200
Small amount down—balance easy monthly payments, or $4.00 and less per week.
1928 Nash Spec. 4 Sport Brougham
1924 Dodge Sedan
1925 Nash Adv. 6 Roadster
1927 Chandler Sedan
1928 Nash Advanced Six Sedan
1924 Buick Master Six Touring
1926 Nash Spec. Six Buick Victoria
1927 Nash Special Six Coach
1924 Dodge Sedan
1925 Packard Touring
Under $500 (Partial List)
Small amount down—balance easy monthly payments, or $7.00 and less per week.
Most of them carry our famous Blue Seal Guarantee
1929 Essex Coupe
1924 Nash Adv. Six Sport Brougham
1926 Hupmobile Sedan
1926 Nash Special Six Victoria
1926 Hupmobile Custom-Built Vic.
1929 Nash Coupe
1929 Chevrolet Sedan
1927 Nash Adv. Six 7-Pass. Sedan
1926 Packard Club Sedan
1928 Nash Special Six Coupe
1926 Studebaker Commander Sedan
1928 Nash Cabriolet
1927 Nash Advanced Six Sedan
Over $500 (Partial List)
Small amount down—balance easy monthly payments, or $8.00 and more per week.
Guaranteed in writing for 2,500 miles
The most liberal guarantee ever offered
1930 Auburn Sport Cabriolet
1929 Nash Spec. 6 Sport Brougham
1930 Chrysler Model 75 Coupe
1929 Nash Adv. 6 Twin Ignt. Sedan
1929 Hupmobile Custom-Built Sport Roadster
1930 Erskine Sedan
1930 Nash Spec. Six Twin Ignition Sedan
1930 Nash Cabriolet
1930 Willys Six Sport Sedan
1930 Nash Special Six Twin Ignition Victoria
1927 Packard Sport Sedan
COME IN AND LOOK 'EM OVER!
NASH-NEWARK, Inc.
Famous for Service
380 Broad Street
Tel. Mar. 2-2388
OPEN EVENINGS

THE NASH-NEWARK, INC., Newark, N. J., used a unique ad to feature a used car sale. The copy, reproduced above, measured 3 columns by 10 inches, with the cut-outs of cars, in which appeared description and price, setting off the display. There were 49 cars featured, and the sale was successful

FORD DEALER MERGER REPORTED IN MINNESOTA

Minneapolis, Minn., June 12 (UTPS). — Sturr-Gilfillan Motor Company, 63 South 13th St., one of the largest Ford retail representatives, has taken over the Christian-Lindsay Company, Inc., 1300 Hennepin Avenue, and has moved into the Christian-Lindsay Building. Ford representation has recently been reduced from seventeen to twelve through retirement of some of the smaller dealers.

DALLAS CAR DEALERS IN SERVICE CAMPAIGN

Dallas, Tex., June 12.—A co-operative advertising campaign designed to promote business in the service departments, and patterned after similar campaigns now in force among the automotive dealers in San Antonio and Houston, has been started by members of the Dallas Auto Trades Association. The committee in charge of the arrangements consists of H. B. Ransom, president of the association; Lee R. Filgo, Gordon Perry, Guy M. Godley and Ed Maher.

Members of the association taking part in the campaign are:

City Chevrolet Company, Walter C. Cameron Motor Company, Duggan-Bishop Company, Inc., Filgo Motor Company, Flippen Auto Company, C. S. Hamilton Motor Company, Fishburn Motor Company, Lamberth Motor Company, Langford Motor Company, McCollister Chevrolet Company, Morris Buick Company, John E. Morris Company, Nash-Texas Company, Packard-Scruggs Company, Perry Motor Company, Praether Cadillac Company, J. F. Reeves Franklin Company, Inc., Rose-Wilson Company and J. H. Shelton Company.

Two meetings of dealers marked activities along automobile row here this week. Exide battery dealers and officials numbering approximately 125 attended a sales conference at the Cedar Crest Country Club. E. F. Connolly and L. C. Dean of St. Louis, officials of the Electric Storage Battery Company of Philadelphia, led in the discussions. V. A. Hargett and Harry Hargett and W. C. Jacobs served as local hosts.

More than fifty dealers and salesmen of De Soto forces held a sales conference at the headquarters of the Good Street Motor Company. J. F. Boyd, assistant general sales manager, De Soto Motor Corporation, led in the discussion, assisted by G. F. Schlecht, district manager of Dallas, E. Gordon Perry of Perry Motors and G. C. McClellan of the Good Street Company.

PACKARD CO. SERVICE "DEAN" IS HONORED

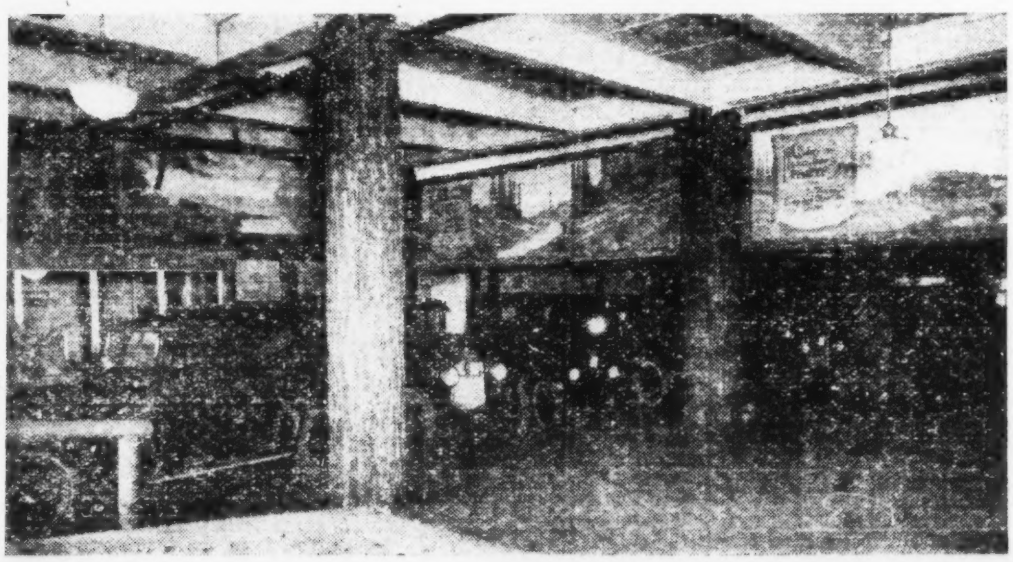
Philadelphia, June 12.—Clifford G. Culver, general service manager of Packard, Inc., 3223 North Broad St., has been honored in recognition of his twenty-five years spent with Packard in this city. When he returned from luncheon on this anniversary, a floral gift was presented to him. Mr. Culver is "dean," in length of service, of all Packard service executives in the entire country.

Aside from his long period with the local organization, he had previously spent about four years at the Packard factory in Detroit. The executives and associates of Packard, Inc., consider themselves fortunate in having at the head of the large service division a man of such extensive experience and one who has contributed in no small degree to Packard's position in the fine car field in this territory.

WILLYS-OVERLAND GROUP MEETS IN PHILADELPHIA

Philadelphia, June 12.—The annual mid-year sales session of Willys-Overland distributors and their wholesale representatives and retail managers from Easton, Reading, Harrisburg, Baltimore, Washington, Norfolk and Richmond was held here recently, directed by N. A. Beardsley, general sales manager of the Eastern division. The business session was held in the Benjamin Franklin Hotel, with Herbert Bros., Philadelphia distributors, as hosts.

That Sells Used Cars Merchandising Method



Real bark from the trees felled from Pacific Northwest forests, together with hand-painted scenes of the country around Seattle, Wash., have made a unique used car department for the Eldridge-Buick Company.

Dealers nearly always have a good-looking showroom for displaying new cars, but, by glorifying an ordinary sales floor and bare walls, this Seattle firm has succeeded in glorifying the merchandise also, and in making used cars look more than junk.

Ralph Norbom, used car manager, reduces the price for every thirty days the car remains on his hands, for he figures that he loses $3 or $9 the first thirty days he has an automobile; $24 or $25 the first sixty days, and $108 the first ninety days. Besides the main salesroom for used cars, there are two others. Cars are shifted around from location to location until sold.

The exact location of every used car is known at all times by reference to a large blackboard in Mr. Norbom's office. This is marked off into small squares, in the center of each a pin, on which the small cardboard disks are hung as they are changed about. Another column is entitled "Loaned Out," which refers to the cars which salesmen are using to demonstrate, so a salesman will not lose time going to one of the locations for a car that may be elsewhere when he arrives.

"FOR smoothness, power and mountain climbing the new Willys Six has given us the greatest thrill in sixteen years' driving experience. Everyone who has seen the car has expressed great enthusiasm."

—Swartley Brothers,
Souderton, Pa.

Write or wire for franchise particulars

Willys-Overland, Inc., Toledo, O. Willys-Overland, Ltd., Toronto, Can.

WILLYS

A BIG SIX priced like a four
A POWERFUL EIGHT . . .
A BRILLIANT KNIGHT . . .
2 NEW WILLYS TRUCKS

Automotive Daily News

"Of, By and For the Entire Automotive Industry"

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ADVERTISING AND BUSINESS HEADQUARTERS

Harry A. Tarantous, Business Manager. 350 Hudson St., New York, N. Y.
George M. Slocum, Manager Detroit Bureau, 427-8 Fisher Building, Detroit, Mich., phone Empire 3500; Willard R. Cotton, Western Manager, 333 North Michigan Ave., Chicago, Ill., phone Central 5936; Metz B. Hayes, New England Manager, Little Building, Boston, Mass.; Blanchard, Nichols & Coleman, American National Bank Building, San Francisco, Cal.; Lincoln Building, Los Angeles, Cal.; 1037 Henry Building, Seattle, Wash. Address ALL advertising and business correspondence to 350 Hudson St., New York City.

EDITORIAL DEPARTMENT

350 Hudson St., New York, N. Y. Telephone CA nal 6-1000
Alexander Johnston, Editor. William C. Callahan, News Editor.
Statistical Department (registrations and specifications), P. J. Robas, statistician, C. J. Alexander, sales analyst. Engineering Department, A. Benson Carleton, technical editor; J. Russell Walsh, engineering editor. Merchandising Department, Charles S. Zack, editor. Art Department, John Bauersfeld, director.
Detroit Bureau, Chris Sinsabaugh, editor, 427-8 Fisher Building, Detroit, Mich. Telephone Empire 3500. Contributing editor, John C. Wetmore.

The S. A. E. Meeting

DURING the coming days the focal point of automotive interest will shift to White Sulphur Springs, the beautiful mountain resort in West Virginia, where the Society of Automotive Engineers will foregather for its annual summer meeting. One of the most interesting programs that have ever been presented at one of these annual gatherings has been lined up for presentation and discussion at White Sulphur.

On Sunday the battle starts with a session on motor trucks and buses, during which Martin Pulcher of Federal will read a paper on that moot question "Rating the Motor Truck." L. R. Buckendale of Timken-Detroit will follow with a suggestion for a standard basis for rating trucks. This ought to start off the fireworks admirably, and some warm discussions are sure to follow the papers.

On Monday the engineers will consider motor fuels, motor coach transportation and Diesel engines. Tuesday will be devoted to passenger cars, the morning being given up to considering the problems of the body engineer, and the afternoon to a general review of the field.

Wednesday ought to bring some spirited action, with future developments as the basic theme for the day, and "The Field for Synthetic Lubricating Oils" will start the session, to be followed by "The Case in Favor of Cars With Rear Drive Engine Mountings." Wednesday, after the regular business meeting, the engineers will plunge into a consideration of aircraft. Thursday aviation will continue to hold the front seat with aircraft engines the particular consideration.

Thursday the motor vehicle chassis will hold the center of the stage, and there will come up for discussion such subjects as, "The Tire Factor in Automobile Riding Quality," "Road Tests with a Wabblemeter," "Some Observations on Riding Qualities" and "Instrumentation as a Means for Coordinating Chassis and Body Design."

And Friday morning the engineering sessions will wind up with a consideration of engines and such papers as, "Oil Control in the Engine," "Winter Starting Tests," "Reduction of Fan Noise and Fan Power."

Of all organizations of similar objective, the Society of Automotive Engineers has best found the way of joining work and play at its annual gatherings. Here are discussed the latest developments in the field of automotive engineering. The engineers, so to speak, "take their back hair down" and talk right out loud about what they have been doing and what they have learned during the twelve months preceding. It is small wonder that attendance at these meetings is usually heavy and enthusiastic. Even in this drab year, when the purse-string holders are watching every penny that goes out, all the leading manufacturers will be represented at White Sulphur by members of their engineering staff.

It is almost a truism that subjects which are discussed at these summer meetings of the S. A. E. find their practical application in the cars, trucks and buses that are offered three or four years hence. Not many years ago the engineers devoted a great part of a summer meeting to discussions of transmission developments. Time passed and a perfect flood of improvements in existing transmissions broke over the automotive industry. This flood has reached high tide this year, as any observer will notice in even the most cursory examination of the specifications of 1931 models.

This year it will be noted the engineers are earnestly considering fuels, which have always been consistently subject to development, Diesel engines, which are just beginning to be heard about by the general public, and cars with engines mounted in the rear. If the engineering wisdom of the industry finds any or all of these subjects practically hopeful of development, we may look for the applications in the cars of 1934 or 1935.

Automotive Daily News has made elaborate preparations to cover the S. A. E. meeting as never before. A representative of this paper will be on hand to cover the discussions that follow the presentation of papers, these latter of course being published also. We are going to give our engineering readers who are not able to be in White Sulphur this week complete reports from the front while the proceedings are still news.

Differential Discussions

IN this column Automotive Daily News is glad to present the opinions of its readers on topics related directly to the automotive industry. Automotive Daily News, however, must disclaim responsibility for such opinions. All questions regarding merchandising, technical problems or other information pertaining to automotive industry will be answered without charge in this column.

Where, Why and What to Do With the Long Trader

Automotive Daily News: Referring to your invitation in Wednesday's paper in re Mr. Lewis' automotive observations for June, I agree heartily with all he has to say, but he has not differentiated between long trading as a disease and as an expediency.

Just as the shoe merchant, the furniture man and the jeweler must mark down over-stocks or slow sellers to move them, the automobile dealers must do the same, but—the dealers' mark-down is in the way of a mark-up of used car values, and from long experience I find that over-allowances made by reputable dealers invariably have back of them—a reason.

The factory is overstocked on certain models and gives the dealer an extra $200 or a certain per cent. He passes it on to his customer, giving him $500 for the old boat instead of $300. The question is, Does that put the dealer in the "bad business—bad morals" class, or is he being imposed upon?

Dealers are frequently asked to help move a surplus when changes in models are imminent. They are often asked by distributors or factory representatives to move obsolete stuff at their own loss, just to be a "loyal dealer" or a "good fellow," with a vague promise that he will receive benefits later (benefits which never come) and again he resorts to long allowances.

Then there is the dealer's own "over stock" to consider. What method other than long trading is open to him? His floor plan paper may be coming due for the second time, the finance company wants its money and, assuming that normal methods, "sound management," keeping his "merchandise abreast of requirements," makes moving such cars imperative. Again, what method is open to him except long trading?

A dealer may be ever so conservative and still gain a reputation for long trading when the real reason is back of him, in the manufacturer or distributor who requires his services to help them out of a hole.

When I have gone to a sales meeting where factory representatives are present, and after the presentation of the new models has been made and everybody is full of ginger and anxious to take home the new car and "go to it," the speaker or the territory man gets up and says: "Now fellas, we are going to give you a chance to clean up some extra money, etc." I always knew what was coming, it's a bonus on old models, and if the dealer takes a few and peddles them to those buyers who have been holding out for a better allowance, what happens? A week or so later the new model or the new prices are announced, and the customer is sore, and says: "Never again with that dealer."

The well-organized business man who is an automobile dealer is not afraid of the habitual long trader. He is looked upon as a more or less necessary evil, a poor sucker who has been kidded into a business of which he knows little by the territory man seeking an outlet. He is not to be with us long. He will shortly return to the butcher business or get back his old job in the barber shop.

The focal point for your work on the long trade evil is the manufacturer. Kick him into line with a better marketing program. When he has "left-overs" or a sour seller, let him set a lower price, keeping the dealer's discount at par. Let him advertise the cut price, then the dealer and the buyer are both out in the open. No one is being kidded. Long discounts are an evil because they disorganize the industry. The special bonus, not being known by the trade in general, leaves the dealer's competitor puzzled.

Alvin Macauley, in his address to the National Chamber, told the manufacturers some very pertinent facts, for instance: "Our critical point, as is well known, is our distributor and dealer organizations. Our problem is to keep them strong enough to emerge from the depression with unimpaired vitality!" . . . "There is a sufficient volume of business being transacted today to maintain and support the existing distributor and dealer organizations in a fairly satisfactory way, if sales were being made on the lines of good business practice." . . . "There is no use trying to hide our heads in the sand—the trading of used cars is on a deplorable basis," etc.

Instead of working the territory to uncover every possible dealer, let the manufacturers divide the territory. Let them strive to compete with but not to eliminate each other. Let them take a leaf from the book of the packing house industry, assigning to territory only such outlets as can be profitably employed.

Instead of reading in your interesting paper that "the who-ziz has signed up 1,260 new dealers so far this year," we would no doubt see that "the automobile industry as a whole is weathering the depression more safely than others."

And let the finance companies take a hand, refusing to recognize list prices that have been secretly cut through bonuses or trade allowances. If we can smoke out the trade allowance, we will have gone a long way toward curing the long trade evil.

Mr. Macauley's statement that there is a sufficient volume of business today to maintain us is a fact, and those of us who understand that management is not a part-time job, to be taken from new car sales, nights and rainy days, but includes, as of the utmost importance, those items listed by Mr. Lewis in his "observations"—service, accessory sales, carefully planned advertising and also careful attention to collections and banking—are finding it possible, not only to support ourselves but to make a profit.

C. M. BRADFORD, President.
Bradford-Reo Company, Inc., Meriden, Conn.

COMING EVENTS

JUNE

14-19—**White Sulphur Springs, W. Va.** Society of Automotive Engineers, summer meeting.
15-18—**Madison, Wis.** American Society of Mechanical Engineers, fourth national oil and gas power meeting.
17-19—**French Lick, Ind.** Steel Founders Society, mid-summer meeting.
21—**Montlery Track, France.** Automobile Club of France, grand prize race.
22-26—**Chicago, Ill.** American Society for Testing Materials, thirty-fourth annual meeting.
22-27—**Boston, Mass.** National Association of Credit Men, convention.
29-30—**Chicago, Ill.** National Association of Taxicab Owners, meeting.

JULY

4—**Altoona, Pa.** Automobile race.
19—**Nurburg-Ring, Rhineland, Germany.** Automobile Club of Germany, grand prize race.

SEPTEMBER

1- 3—**Cleveland, O.** Hotel Statler, Society of Automotive Engineers, twentieth annual aeronautical meeting in conjunction with National Air races.
8-17—**Utrecht, Holland.** Utrecht Fair, bus and truck show.
16-17—**Atlantic City, N. J.** National Petroleum Association, annual meeting, Hotel Traymore.
20-26—**Springfield, Mass.** Eastern States Exposition.
21-25—**Boston, Mass.** American Welding Society, meeting.
28-29—**Atlantic City, N. J.** National Association of Motor Bus Operators, fifth annual meeting, Hotel Ambassador.
26-Oct. 2—**Atlantic City, N. J.** American Electric Railway Association, annual meeting.

OCTOBER

1-11—**Paris, France.** International Automobile Salon.
2- 3—**Houston, Tex.** American Institute of Mining and Metallurgical Engineers, petroleum division meeting.
12-16—**Chicago, Ill.** National Safety Council.
14-16—**Pittsburgh, Pa.** Society of Industrial Engineers, convention.
15-24—**London, England.** International Motor Exhibition, Olympia Hall.
22-28—**Prague, Czecho-Slovakia.** International Automobile Exposition.

WE STAND CORRECTED

Automotive Daily News: I note with interest an article on the front page of your June 6th issue which states that under a new law passed by the Connecticut State Legislature, "garage men are required to secure written permission of the owner for automobile repairs costing more than $50." I feel that a little more accuracy on the part of your correspondent would not be amiss in view of the following circumstances.

In 1921 a bill was enacted by the Legislature which reads as follows: "Section 1632. If any repairman or automobile mechanic shall receive any motor vehicle for the purpose of making repairs, he shall, before his charges upon the same shall exceed the sum of fifty dollars, obtain from the owner or possessor of such vehicle a written authority for any expenditure in excess of said sum. No civil action shall be maintained for any of such charges exceeding the sum of fifty dollars unless the same were authorized in writing as herein provided."

The writer, as clerk of the Committee on Motor Vehicles, in the recently adjourned 1931 session, introduced a bill calling for the repeal of the above Section 1632. While it is true that the bill did meet with some opposition when it reached the Senate, it was subsequently passed by both branches of the Legislature, thus removing from the statutes what many automobile dealers considered extremely unfair and discriminating legislation. I would appreciate a correction in your columns.

CHARLES B. BEACH, INC.,
Hartford, Conn.

WE GUESSED THIS, BUT THANK YOU

Automotive Daily News: Recently I addressed to you a letter in regard to an article published in the June 5 News, written by C. Edward Barnett.

This letter was mailed while I was out of the office, and I do not believe it was signed.

I beg your pardon for this oversight, and hope you can overlook it. I have never sent any anonymous letter to any one, and don't intend to.

In the event you should wish to use my letter for any purpose, you may also use my name in connection with it.

GEORGE GORDON BOND,
Accountant, Burke Nash, Inc.,
Hartford, Conn.

CHICAGO NASH DEALERS GUESTS OF C. W. NASH

Kenosha, Wis., June 12.—One hundred Nash Motors Company dealers from the Chicago area arrived in Kenosha yesterday afternoon on the palatial yacht Mizpah, owned by Eugene McDonald, Chicago radio manufacturer, as guests of C. W. Nash, president of the company.

Each dealer was to drive back to Chicago in one of the new Nash models under production at the Kenosha plant. The new series is to be announced soon.

CLASSIFIED ADVERTISEMENTS IN THE AUTOMOTIVE DAILY NEWS BRING RESULTS

"TIME-SENSE"

From an article in Nation's Business by

CHARLES M. RIPLEY

of the General Electric Co.

"The greatest single differential between America and other countries is simply this:

"America has discovered the value of time, the importance of saving time and the necessity of liberally using appliances and services that save time.

"To that discovery we owe our high wages, low selling costs, big home market and high standard of living.

"Sages through the ages have recognized the importance of saving time, but Americans, as a people, are the first to put preaching to practical application—the first to develop 'time sense.'

"This 'time sense' reveals itself in many ways; in our mass production; our use of telephone and telegraph; our use of automobiles, fast trains, fast steamships, airplanes; our use of trucks, tractors, and farm machinery; our use of bookkeeping machines, typewriters, statistical machines, check signers, letter sealing devices, and visible filing systems; our use of vacuum cleaners, washing machines, and other household machinery."

—And Automotive Daily News

The S. A. E. meeting opens tomorrow, Sunday, June 14th, and on that day we will distribute Automotive Daily News at White Sulphur Springs.

On Monday we also will distribute Automotive Daily News, and the papers to be read on Monday will be in that issue. Similarly, Tuesday's papers with all the news of the preceding day will be distributed at White Sulphur Springs on Tuesday, and so on through the week.

But the thousands who do not attend at White Sulphur Springs also will get the S. A. E. issues, so that when the week is over the papers, discussions and other news of the meeting will be propagated by one automotive news medium only, and that is Automotive Daily News.

Automotive Daily News, the paper with "Time Sense," can deliver an advertising message so it will be seen by factory officials and dealers.

Automotive Daily News

H. A. TARANTOUS, *Business Manager.* 350 HUDSON STREET, NEW YORK CITY

WESTERN OFFICE: Willard R. Cotton, Manager, 333 No. Michigan Ave., Chicago, Ill.
DETROIT OFFICE: Geo. M. Slocum, Manager, Fisher Building, Detroit, Mich.

Formula Suggested for Uniform Truck Rating

Proposed Method Considers Gross Vehicle Weight Hauled Up Standard Grade, 85% Over-All Mechanical Efficiency, and Assumed Uniform Rolling Resistance

By L. R. BUCKENDALE
Executive Engineer, Timken-Detroit Axle Co., Detroit, Mich.

The following is a paper to be presented Sunday before the summer meeting of the Society of Automotive Engineers at White Sulphur Springs, W. Va.

One of the important needs of the motor truck industry is a unit of rating, a yardstick, if you please, by which the inherent ability of trucks can be measured.

As mentioned in a previous paper, the origin of the motor truck was the same as that of the motor car. The ability of the very early vehicles was very limited, either in carrying passengers or freight, because of the extremely low power developed by the engine. Since the power of the engine was limited and the need in the passenger car was speed and riding comfort, and in the truck the need was carrying ability, we find the paths of development of the chassis for these two classes of vehicles quickly diverging. Therefore the power or torque developed by the engine must be one of the elements of the yardstick desired.

It was necessary for the motor truck to have a greater ratio factor between the engine and wheels, so as to take the maximum advantage of the limited power of the engine. This ratio factor is composed of two components, one being the gear reduction from the engine to the rear axle shaft and the other the effective radius or leverage of the wheels themselves. Therefore, these two components must also be elements of the yardstick of ability of motor trucks.

Another element which is inherent in the vehicle itself is the overall mechanical efficiency.

These factors—engine torque, gear reduction, effective radius and over-all mechanical efficiency—determine the ability of the motor truck to move a gross weight under given conditions. The phrase "given conditions" must necessarily contain additional factors of our yardstick.

It is obvious that for a given power the load that can be moved up a hill must be less than the load moved on the level. So the gradient of the road must be considered in our yardstick.

It is also evident that a greater load can be moved over a hard, level road with a given effort than can be moved in deep mud. So our yardstick must also include the rolling resistance of the vehicle. In considering the rolling resistance of the vehicle, wind resistance usually is included.

Formulas for Determining Factors

For convenience in determining the ability of motor trucks, the following abbreviations will be used:

Gross Vehicle Weight.....G. V. W.
(This becomes gross train weight (G. T. W.) when tractor or trailer trains are considered.)
Engine Torque, in pounds-inches..T
(This can be derived from the cubic displacement by multiplying by 7.2 for low compression, by 7.8 for medium compression, and by 8.4 for very high compression engines.)
Total Gear Reduction.....R
Over-all Mechanical Efficiency...E
(The over-all mechanical efficiency in high gear may be assumed as 0.85 and 0.78 in primary transmission gear, and 0.72 when auxiliary transmission gears are used in addition.)
Radius of Tire Under Load (See Table No. 1).....W
Gradient, expressed as the amount of rise in feet per foot traveled .....G
(This is the sine gradient and agrees with the tangent up to 10 degrees.)
Rolling Resistance, expressed as pounds of resistance per pound of load (See Table No. 2).....F

If we put these elements together in their proper relation, we have:

$$G.V.W. = \frac{T \times R \times E}{W \times (G + F)} \quad (1)$$

This is our yardstick, and when we look at it closely we find something very familiar. Portions of it have appeared many times in papers read before this society, and its elements were most ably discussed by Austin M. Wolf in his paper, "Practical Tractive Ability Methods," published in the S. A. E. Journal, December, 1930.

Of course, this formula may be expressed in a number of different ways to find any one factor when all the other factors are known, for example:

$$G.V.W. = \frac{T \times R \times E}{W \times (G + F)} \quad (1)$$

$$T = \frac{GVW \times W \times (G + F)}{R \times E} \quad (2)$$

$$R = \frac{GVW \times W \times (G + F)}{T \times E} \quad (3)$$

Table 1 contains the rolling radius (W), and carrying capacities of the various low-pressure tires in use.

Table 2 gives the values of rolling resistance (F), for varying road conditions.

TABLE 1

Tire size	Load cap. lb.	Rolling Radius (W) in.
5.50-20	1,225	15.19
6.00-20	1,400	15.42
6.50-20	1,650	15.98
7.00-20	1,900	16.49
7.50-20	2,100	16.90
8.25-20	2,550	17.70
8.25-22	2,800	18.72
9.00-20	3,350	18.20
9.00-22	3,500	19.10
9.00-24	3,650	20.12
9.75-20	3,900	18.87
9.75-22	4,200	19.84
9.75-24	4,400	20.82
10.50-20	4,700	19.55
10.50-22	5,000	20.52
10.50-24	5,200	21.44
11.25-20	5,450	20.23
11.25-24	6,050	22.13
12.00-20	6,250	21.21
12.00-24	6,950	22.95

TABLE 2

Type of Road	Rolling Res. (F) Lb. Per Lb. of Load
Concrete—	
Excellent	0.01
Good	0.015
Poor	0.02
Asphalt—	
Good	0.0125
Fair	0.0175
Poor	0.0225
Macadam—	
Good	0.015
Fair	0.0225
Poor	0.0375
Cobbles—	
Ordinary	0.055
Poor	0.085
Snow—	
2 inches	0.025
4 inches	0.0375
Dirt—	
Smooth	0.025
Sandy	0.0375
Mud	0.0375 to 0.15

Having a yardstick, the question is, how do we use it?

Observation has shown that a greater ability-factor is required in heavy-duty work, such as dump service, than for average service, and this ability will vary with different types of service. If we define the type of service as the amount of gradient, we can express heavy-duty work as 7 per cent. grade, average duty as 6 per cent. grade, very favorable conditions as 5 per cent grade, and tractor and trailer service as 4 per cent. grade. This gives us a set of standard conditions for ratings, just as we have standard conditions for engine tests.

Further observation shows that a

(Continued on Page 10)

MULLINS STAMPINGS
FOR THE AUTOMOBILE INDUSTRY

WRITE!
Mullins Mfg. Corp., Salem, Ohio
332 So. Michigan Ave., Chicago.
General Motors Building, Detroit.

Methods of Truck Rating Should Be Revised

Consideration of Carrying Capacity, Truck Weight, Tractive Capacity Suggested as Simple Practical Truck Rating Basis

By M. L. PULCHER,
President, Federal Motor Truck Co., Detroit, Mich.

The following is a paper to be presented tomorrow at the opening session of the summer meeting of the Society of Automotive Engineers, at White Sulphur Springs, W. Va.:

For years we men in the motor truck industry have sought a practical method of truck rating that would at least approximate truck performance, but, to paraphrase Mark Twain's comment on the weather, while much has been said on the subject, nothing has ever been done about it.

To study the wide variations in specifications of trucks of the same tonnage is interesting. In the 1½-ton group, chassis vary in weight from 2,400 to 5,300 pounds; in the 2-ton group, from 2,925 to 6,800 pounds; in the 3-ton group, from 4,500 to 8,500 pounds, and in the 5-ton group, the spread is from 5,800 to 11,300 pounds.

Some manufacturers make tire capacities a basic rating factor. By the simple expedient of increasing or reducing tire sizes they increase or reduce a chassis rating. One manufacturer gives a single chassis five ratings through the use of as many tire sizes.

Some manufacturers use engines of sufficient size to "overpower" the vehicle, while others use medium or undersized engines and obtain tractive ability with multiple-speed transmissions and low rear axle ratios.

From the foregoing it is clear that not even an approximation of uniformity exists in the relationship of truck ratings to performance and that many ratings are incorrect measures of truck performance.

In attempting to prescribe a rating formula, we should decide first what the rating is to stand for. Some manufacturers believe that it should represent the actual carrying capacity of the vehicle; others that it should be sufficiently low to provide for a considerable overload. A maximum rating is unquestionably an honest one, but for years the truck operator has been educated to believe that the rating is largely a starting point and that in establishing the rating an overload is contemplated.

Three Angles of Approach

Three angles from which to approach the subject are:

1—A conservative rating, both manufacturer and customer agreeing that the vehicle is capable of carrying a considerable overload.

2—A maximum rating, all that the vehicle will safely carry under average operating conditions.

3—Abolition of ratings entirely and substitution of the maximum gross allowable weight.

Conservative rating (1) has been common practice since the inception of the truck industry and is the method generally used by purchasers in the selection of a truck.

While the gross allowable weight really fixes truck capacity, tonnage ratings have always been used by the layman to designate truck sizes and therefore should be retained in the general scheme of ratings.

A truck is operated under good and bad conditions alike. It may travel most or all of the time on smooth cement pavements, or it may work during its entire life in and out of gravel or sand pits, over unpaved roads, driven by a brutal driver. Therefore a rating (2) based on maximum capacities under favorable or average conditions is misleading when applied to unfavorable conditions. I am inclined to favor a conservative rating, which allows for a reasonable overload and provides for variable conditions, a practice that twenty-five years of merchandising has proved sound.

Factors Involved in Truck Ratings

What factors shall we consider in rating a truck? Certainly a relationship should exist between truck weights and ratings. Obviously, a truck that weighs twice as much as another should have greater capacity than the second one and should be rated higher. Equally obvious is the fact that the manufac-

(Continued on Page 10)

CUMULATIVE NEW PASSENGER CAR

In this table 14 states and the District of Columbia — **Returns for today: Arkansas, Idaho, Maryland, Minnesota,**

States	Auburn	Austin	Buick	Cadillac	Chevrolet	Chrysler	Cord	De Soto	De Vaux	Dodge	Durant	Essex	Ford	Franklin	Graham	Hudson	Hupmobile	La Salle	Lincoln
Arkansas	2		19		371	21		9		41	1	3	316		12	4		1	
Delaware	0		42	6	215	31		7	1	4	8	22	245	1	3	4		3	1
Idaho	11	1	25	1	313	18		15	4	29	7	8	252		9	5			
Illinois	445	16	634	117	4185	466	36	233	32	554	32	324	4557	21	110	119	175	98	49
Maryland	36	1	125	8	1382	97	1	33		61	13	82	1055	7	33	28	32	10	6
Minn.	81	5	239	11	2496	238	2	56	3	152	22	122	1852	1	69	53	102	12	6
Montana	2	2	39	5	332	39		18	2	26	11	19	327	1	6	21	4		1
N. Dakota	8		29	1	424	29		5		42	6	10	330		9	7	5		
Rho. Isl.	60	3	125	10	551	90		64		58	2	66	424	5	24	17	23	18	3
S. Carolina	5		43	1	699	50		31		30		22	714		2	8	11	3	
S. Dakota	6	5	31		401	42		18	2	54	5	12	340		7	5	9		
Utah	3		15	1	234	8	1	5	17	17	7	20	205	3	18	10	9	1	3
W. Va.	43	5	60	7	772	98	2	27	3	94	7	49	794		25	18	13	8	1
Wisconsin	148	7	329	29	2502	212	5	111	85	272	27	217	1844	2	85	90	55	24	6
D. of Col.	44	1	84	15	907	52	2	38		84	9	52	999	4	33	18	37	4	7
Totals	900	46	1396	212	15784	1491	49	670	149	1518	157	1028	14257	45	449	407	475	182	83
Ark., '30	1		27	5	671	35		9		45	9	19	902		8	6	3	5	2
Del., '30	9		49	6	225	23	1	9		9	18	14	374	2	2	11	6	11	1
Idaho, '30			43	1	455	22		26		52	23	16	581	2	18	16	3		
Ill., '30	124		1039	111	4749	655	43	354		582	92	458	9417	87	324	253	319	191	62
Md., 1930	6		201	10	1294	89	1	23		79	27	97	1725	7	63	37	47	20	5
Minn., '30	24		259	7	2832	262	4	82		212	118	224	4771	3	152	90	91	25	4
Mont., '30	3		42	2	399	37	1	21		44	20	49	578	7	15	28	13	1	
N. D., '30			41		651	32	2	15		34	18	19	827		15	4	2	1	
R. I., 1930	18		122	9	448	76	2	63		82	5	77	745	7	17	40	15	16	6
S. C., '30			54		743	37		12		23		22	864	1	10	19	9	2	
S. D. '30	3		30		586	44	2	21		45	25	34	634		5	15	18		
Utah, '30	7		44	3	316	30	1	19		27	34	39	596		26	19	5		1
W. Va., '30	9		108	3	1215	98	2	52		151	25	91	1688	6	61	36	17	11	
Wis., '30	34		638	37	3533	293	10	147		388	93	345	5456	32	243	171	100	44	13
D. C., '30	7		92	10	486	40		21		32	18	57	1069	1	45	23	21	9	3
Totals, '30	245	*	2797	204	18603	1778	69	874	*	1865	525	1561	30277	155	1004	758	679	336	97

*Not in production at that time.

Who's Who at the S. A. E. Summer Meeting

(Continued from Page 2)

Chandler, Mrs. Henry, New York city.
Chase, Herbert, McGraw-Hill Publishing Company.
Chase, Julian, Automotive Industries.
Chilton, Roland, Wright Aeronautical Corporation.
Clark, E. A., E. G. Budd Manufacturing Company.
Clark, William G., Pure Oil Company.
Clayden, A. Ludlow, Sun Oil Company.
Clegg, L. M., Thompson Products, Inc.
Clissold, E. M., Firestone Steel Products Company.
Cole, Dale S., Leece-Neville Company.
Cole, Mrs. Dale S., Cleveland, O.
Coleman, A. F., Standard Oil Company of New York.
Coleman, Henry B., Hoopes, Brother & Darlington, Inc.
Colwell, A. T., Thompson Products, Inc.
Cooper, Howard, Sinclair Refining Company.
Cosgrave, E. J., Detroit, Mich.
Coward, H. A., E. G. Budd Manufacturing Company.
Cox, M. Howard, Fafnir Bearing Company.
Cram, L. V., Chevrolet Motor Company.
Crane, H. M., General Motors Corporation.
Cummings, H. K., Bureau of Standards.
Cumming, William J., Surface Transportation Corporation.
Cumming, Mrs. William J., White Plains, N. Y.
Daisley, Robert H., Wilcox-Rich Corporation.
Daisley, Mrs. Robert H., Detroit, Mich.
Davis, W. N., Davis Tool and Engineering Company.
Dawe, C. N., Vanadium Corporation of America.
Dawe, Mrs. C. N., Detroit, Mich.
Day, J. A., Burgess Battery Company.
DeClercq, A. E., Detroit, Mich.
Delchamps, Miss Ursula, Society of Automotive Engineers.
Denham, Athel, Chilton Class Journal Company.
Dick, Burns, Wagner Electric Corporation.
Dick, Mrs. Burns, St. Louis, Mo.
Dickey, S. S., Harding Junior High School.
Dickinson, H. C., Bureau of Standards.
Dodge, A. Y., Bendix Research Corporation.
Dole, John L., Dole Valve Company.
Donaldson, J. G., Long Manufacturing Company.
Drummond, Robert S., National Broach and Machine Company.
Drummond, Mrs. Robert S., Detroit, Mich.
Duesenberg, F. S., Duesenberg, Inc.
Duesenberg, Mrs. F. S., Indianapolis, Ind.
Duesenberg Denny, Indianapolis, Ind.
Edgar, Graham, Ethyl Gasoline Corporation.
England, W. E., Houde Engineering Corporation.
Ekesrgian, C. L., E. G. Budd Manufacturing Company.
Evans, J. M., Associated Oil Company.
Fahnestock, Murray, Ford dealer and service field.
Fahnestock, Mrs. Murray, Pittsburgh, Pa.
Faurote, Fay Leone, Society of Automotive Engineers.
Ferrandou, A. H., Fargo Motor Corporation.
Ferrandou, Mrs. A. H., Detroit, Mich.
Figgie, Harry E., Standard Steel Spring Company.
Figgie, Mrs. Harry E. Lakewood, O.
Figgie, Harry Jr., Lakewood, O.
Figgie, Dorothy, Lakewood, O.
Fishleigh, W. T., Detroit, Mich.
Fishleigh, Mrs. W. T., Detroit, Mich.
Follensby, R. A., Whitney Manufacturing Company.
Forbes, Duncan P., Gunite Corporation.
Fox, M. L., Houde Engineering Corporation.
Fransom, Tore, Chrysler Motors, Engineering Laboratories.
Fries, R. E., Columbia Axle Company.
Funk, J. B., Champion Spark Plug Company.
Funk, Mrs. J. B., Detroit, Mich.
Gamble, D. E., Borg & Beck Company.
Gelzer, J. A., Wagner Electric Corporation.
Gelzer, Mrs. J. A., St. Louis, Mo.
Geniesse, J. C., Atlantic Refining Company.
Gilchrist, C. F., Electric Auto-Lite Company.
Glynn, F. K., American Telephone & Telegraph Company.
Glynn, Mrs. F. K., New York city.
Gossard, A. H., Middle West Utilities Company.
Gossard, Mrs. A. H., Chicago, Ill.
Graham, Herbert W., Jones & Laughlin Steel Corporation.
Graham, Mrs. H. W., Pittsburgh, Pa.
Graham, M. P., Thompson Products, Inc.
Grasett, D. B., Crane Packing Company.
Grasett, Mrs. D. B., Winnetka, Ill.
Gray, Jack, AC Spark Plug Company.
Gray, Mrs. Jack, Detroit, Mich.
Greenlee, James T., Imperial Brass Manufacturing Company.
Greenlee, Mrs. James T., Chicago.
Guernsey, Charles, J. G. Brill Company.
Halbleib, Joseph C., North East Appliance Corporation.
Hale, James E., Firestone Tire and Rubber Company.
Hall, Charles L., United-Carr Fastener Corporation.
Hall, E. S., Michell-Crankless Engines Corporation.
Hall, Mrs. E. S., Canton, O.
Hall, G. P., Dole Valve Company.
Harder, D. S., E. G. Budd Manufacturing Company.
Hargraves, A., Firestone Tire and Rubber Company.
Haskell, Allan G., Champion Spark Plug Company.
Haskell, Mrs. Allan G., New Rochelle, N. Y.
Haynes, L. S., Auto Fan and Bearing Company.
Haynes, Mrs. L. S., Jackson, Mich.
Hazard, F. H., Society of Automotive Engineers.
Henkle, T. H., E. G. Budd Manufacturing Company.
Hergenroether, Ernst J., International Nickel Company, Inc.
Hergenroether, Mrs. Ernst J., Detroit, Mich.
Herreshoff, A. G., Dodge Brothers Corporation.
Herreshoff, Mrs. A. G., Highland Park, Mich.
Hill, E. Govan, Hill Engineering Company.
Hill, J. Bennett, Atlantic Refining Company.
Hill, L. Clayton, Dietrich, Inc.
Hoffman, Roscoe C., Detroit, Mich.
Hoffman, Mrs. Roscoe C., Detroit, Mich.
Holding, J. C., American Stainless Steel Company.
Hollerith, Charles, Automotive Fan and Bearing Company.
Hollerith, Mrs. Charles, Jackson, Mich.
Holt, H. W., Bohn Aluminum and Brass Corporation.
Hopkins, Dan F., Cleveland Graphite Bronze Company.
Horine, M. C., International Motor Company.
Horner, Frederick C., General Motors Corporation.
Horning, H. L., Waukesha Motor Company.
Huf, H. F., Atlantic Refining Company.
Hufferd, George, Thompson Products, Inc.
Hughel, J., Guide Motor Lamp Company.
Hunt, J. H., Motor Wheel Corporation.
Hunt, Mrs. J. H., Lansing, Mich.
Jacklin, H. M., Purdue University.
Janeway, R. N., Detroit, Mich.
Jardine, Frank, Aluminum Company of America.
Jardine, Mrs. Frank, Cleveland, O.
Jardine, Robert, Wilcox Rich Corporation.
Jardine, Mrs. Robert, Detroit, Mich.
Jencick, Stephen, Climax Motor Devices Company.
Joachim, William F., Westinghouse Electric and Manufacturing Company.
Johnson, Carl W., Cleveland Graphite Bronze Company.
Johnson, H. G., Wilcox-Rich Corporation.
Johnson, H. H., E. G. Budd Manufacturing Company.
Jones, R. B., Lapeer and Trailmobile Company.
Kegerreis, C. S., Toledo, O.
Kennedy, James T., B. F. Goodrich Rubber Company.
Kennedy, Mrs. James T., Detroit, Mich.
Kent, B. M., Kwis, Hudson & Kent.
Kent, Mrs. B. M., Cleveland, O.
Kent, Miss Helen F., Cleveland, O.
Kent, P. J., Chrysler Corporation.
Kent, Mrs. P. J., Birmingham, Mich.
Keys, Walter C., Detroit, Mich.
Kimmerling, F. S., Guide Lamp Corporation.
Kindl, C. H., Delco Products Corporation.
Kindl, Mrs. C. H., Dayton, O.
Kinstler, L. L., Holley Permanent Mold-Machine, Inc.
Knight, Boyce W., Ensing Carburetor Company, Ltd.
Knight, Mrs. Boyce W., Chicago, Ill.
Knight, Rufus H., Celotex Company
Knox, R. F., Frost-G-Lite Storage Battery Corporation.
Kryder, G. M., Firestone Tire and Rubber Company.
Kuhlin, G. H., Auburn Automobile Company.
Kunkle, B. D., Delco Products Corporation.
Kunkle, Mrs. B. D., Dayton, O.
Kyle, Geo. L., U. S. L. Battery Corporation.
Kyle, Mrs. Geo. L., Niagara Falls, N. Y.

(Continued on Page 10)

REGISTRATION STATISTICS, MAY, 1931

Montana, Rhode Island and the District of Columbia

States	Marmon	Nash	Oakland	Oldsmobile	Packard	Peerless	Pierce-Arrow	Plymouth	Pontiac	Reo	Studebaker	Stutz	Viking	Whippet	Willys	Willys-Knight	Miscellaneous	Totals
Arkansas		8		8	2			12	19	3	9			4	5		1	871
Delaware		3	7	13	8			7	40	1	6			1	11	4		706
Idaho		16	2	9	2			26	10	4	19			1	14	1		402
Illinois	28	331	118	621	124	34	25	178	878	41	366	7		4	269	42	10	15,329
Maryland	4	50	26	54	22	15	8	59	216	6	70	1	1	1	67	14		3,624
Minn.	3	83	35	223	26		9	226	340	12	120		1	9	238	25	1	6,882
Montana	4	14	8	20			1	32	47	4	23			3	23	3		1,037
N. Dakota	4	15	4	15				37	62		24		1	15	51	4		1,137
Rho. Isl.	2	38	17	25	11	4	15	34	112	14	41	1			22	4	1	1,887
S. Carolina		6	2	18	3		1	15	43	1	12				6			1,731
S. Dakota		13	6	56	3			36	39	1	21		1	8	28	2		1,151
Utah	2	22	4	15	3		1	6	24	2	11				4	4		675
W. Va.	4	36	19	50	13			79	153	5	31			2	113	11		2,542
Wisconsin	16	203	63	235	24	4	12	178	451	19	196		4	17	214	21	4	7,711
D. of Col.	9	41	47	82	39	7	8	27	157	1	62				26	6	11	2,93[illegible]
Totals	76	879	358	1444	280	64	80	952	2596	114	1021	9	8	64	1091	141	28	49903
Ark., '30	1	13	7	7	3		2	47	21		15			14	2	4		1,583
Del., '30		6	8	12	16		2	27	32		12			6	10	3	2	911
Idaho, '30	3	21	17	13	4			34	25	2	18	2	3	13	13			1,451
Ill., '30	82	513	193	565	284	26	46	532	692	67	472	12	31	126	320	131	94	23,046
Md., 1930	4	64	39	59	40	5	11	61	128	7	99		3	29	54	17	7	4,261
Minn., '30	21	97	96	177	51	3	12	407	395	21	198		5	139	214	58	10	11,064
Mont., '30	9	26	14	18	2	2	1	46	36	6	40		3	17	26	12	1	1,519
N. D., '30	18	31	20	30	2			56	63	2	34		1	30	41	6	3	1,998
R. I., 1930	6	40	22	48	32	12	14	66	86	24	22		1	4	35	17	6	2,153
S. C., '30	6	10	4	16	11			27	23	2	11		1	6	4			1,917
S. D. '30	6	26	14	71	5		1	60	39	9	33		4	31	42	9		1,862
Utah, '30	1	16	12	18	7			24	26	4	20			3	2			1,300
W. Va., '30	18	59	32	61	22	1	2	110	121	13	54	1	2	68	87	15		4,229
Wis., '30	46	436	158	330	70	23	25	473	558	33	303		14	123	263	44	17	14,493
D. C., '30	12	24	24	45	31	10	9	47	60	5	44	1	2	2	6	7	11	2,274
Totals, '30	233	1382	660	1470	580	82	125	2017	2305	195	1375	16	70	611	1119	323	151	74,431

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HUPMOBILE
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PLYMOUTH
FRANKLIN
CHRYSLER
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DODGE
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Production--Engineering--Factory

Multibestos Establishes Brake Service Institutes

Multibestos Brake Institute, Los Angeles

After studying the whole brake servicing situation the executives of Multibestos Company believed it to be essential that jobbing executives, jobbing salesmen, owners of garages and super-service stations and mechanics have available:

1. A source of information concerning the latest developments in braking mechanisims, brake lining equipment and materials.

2. An opportunity to have the advice and training of experts on brake servicing, brake service merchandising, trouble shooting, cost control and shop management and arrangement.

With this thought in mind it was decided to open a chain of Multibestos Brake Service Institutes operated usually in connection with the Multibestos jobbing distributor.

It was also thought advisable to have these institutes function as servicing organizations for relining troublesome brake shoes.

These institutes are, in addition, training schools for jobbers' salesmen and a meeting place for mechanics interested in getting together to discuss brake servicing problems.

Each Multibestos Brake Service Institute is headed by a thoroughly trained, technical brake servicing expert, who is available for consultation, and for training, without charge, any mechanic to be a specialist in brake servicing work.

The set-up and equipment of each Institute is thoroughly modern. It includes actual cutaway models of various types of brake mechanisms and charts showing the whole brake systems with instructions as to necessary adjustments.

One of the functions of the institute is to solve unusual brake problems and make the information available to the trade. Naturally, many of the problems apply to specific cars or brake mechanisms. A number of general suggestions have been brought out which are proving extremely valuable. For instance, there seems to be a general opinion that all internal brakes are of the expanding type, such as internal hydraulics. The idea of self-energizing action which is responsible for the wrap created in Bendix, Steeldraulic and other types of self-energizing brakes is not conceived. The practice of setting the adjustment too close, causing loss of the energizing, seems to be prevalent.

Another practice which is also common in installing molded lining is a tendency to "burn in." This practice is a very poor one as it is very apt to cause drum scoring and invariably breaks down the efficiency of the lining.

Especial emphasis should be put on the shaping of bands for all external work. The major proportion of brake squeaks is due to bands not being properly shaped.

The first institute was opened in Chicago. Other institutes are running in Philadelphia, Detroit, Boston, New York and Los Angeles.

In Chicago, the Multibestos Brake Service Institute is operating at 1223 South Michigan Ave., the Multibestos Chicago branch. Ross Cotter, Chicago district manager, is in charge of the Chicago institute. Clyde Elson is the technical brake servicing expert.

The number of dealers and jobbers' salesmen who have already visited this institute alone already totals more than a thousand. In fact, so popular has this institute become in the western territory that it has been necessary for Elson and Cotter to pack up their charts, models and other demonstrating devices and go to many other nearby cities for special sessions. Hundreds of mechanics, unable to come to Chicago, have thus had an opportunity to learn much about servicing brakes.

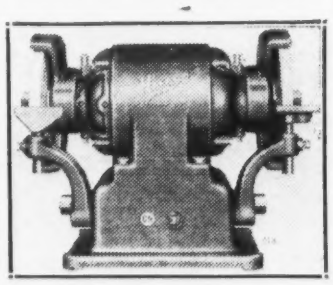
In Philadelphia, the Multibestos Brake Service Institute is located at United Motor Service, 1624 Hunting Park Avenue. C. H. Reichelderfer is the technical brake service expert in charge. The Detroit institute is being conducted at United Motors Service, 495 Milwaukee Avenue West, under the technical direction of Glen Shay.

In Los Angeles, the Multibestos Brake Service Institute is conducted by the Handy Stores, 1501 South Hope Street, with William Ertel, the technical brake expert in charge. During the first month of operation over seventy dealers called for brake information and suggestions to remedy brake problems.

At the opening of the Multibestos Brake Service Institute conference over thirty garage men and mechanics attended.

The success of the Los Angeles and Chicago institutes has been duplicated in every other city where Multibestos has introduced this new merchandising idea. The public, the trade and public officials, to a man, have been enthusiastic in their praise of what Multibestos is doing to reduce automobile accidents due to faulty braking mechanisms.

NEW HISEY GRINDER



NEW HISEY six-seven inch wheel grinder

A new six and seven inch wheel grinder is announced by the Hisey-Wolf Machine Company, Cincinnati, O. It is equipped with an improved commutating type repulsion motor which is claimed to require a low starting current and to overcome difficulties due to low line voltages.

VALVE STEM GUIDES SHOULD BE REAMED

By E. A. KILLMASTER
President Star Products, Inc.
Cleveland, O.

Many repairmen are not absolutely sure as to the proper method of installing valve guides.

They follow the car manufacturer's method of lining brakes, grinding pistons, fitting piston pins, piston rings, etc. So, naturally, they should also follow the car manufacturer's method of installing valve-stem guides.

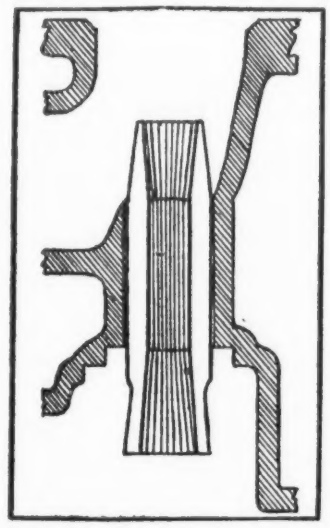


FIGURE 1—Exaggerated sketch showing squeezing action when valve guide has been pressed in. This shows the need of reaming after installation

Factory blue prints on valve-stem guides are most particular on the following three items:

1. The i. d. must be concentric with that part of o. d. which fits into the cylinder block, within .002 inch indicator reading.

2. The i. d. must be parallel with that part of o. d. which fits into the cylinder block within .001 inch.

3. The i. d. must have from .001 inch to .004 inch on inside, which must be hand reamed out after the guides are pressed into the cylinder block. This is made necessary because the i. d. of all guides contracts at the point where they are pressed into the cylinder block.

Some repairmen believe that new valve-stem guides should come to them with the i. d. large enough so no hand reaming need be done after they are pressed in place. The illustration, however, will make clear the need of reaming. Figure 1 shows, in a somewhat exaggerated way, how the diameter of the guide is reduced at the point where it is a press fit in the cylinder block. Such an hour-glass-shaped hole would never do as a guide for the valve stem. Therefore, reaming is essential after the guide has been pressed into the block.

INDUSTRIAL ACCIDENTS COSTLY, SAYS A. E. ALLEN

Atlantic City, N. J., June 12.—"Insurance company statisticians estimate that industrial accidents cost American industry $12,000,000,000 annually," A. E. Allen, vice-president of the Westinghouse Lamp Company, told the members of the Atlantic City Rotary Club at its monthly meeting at the President Hotel here.

"The insurance companies," said Mr. Allen, "pay $2,000,000,000 of this vast sum in claims, fees and hospital charges. The remaining $10,000,000,000 is paid by the manufacturers of uninsurable or indirect costs, which is termed the 'hidden cost' of industrial accidents."

GENERAL TIRE DIVIDEND

Akron, O., June 12.—Directors of the General Tire and Rubber Company today declared the regular quarterly dividend of $1.50 a share on the company's preferred stock.

S. A. E. Members Gather For Summer Meeting

(Continued from Page 1)

truck weight and carrying capacity, and that the tractive capacity to propel the gross allowable weight is a factor which enters into the consideration of truck rating. Examples of the use of these factors for truck rating will be given, not as definite formulae, but for the stimulation of work by engineers representative of the industry toward the development of suitable formulae for truck rating.

The second day, two morning sessions will be held: one devoted to discussion of fuels, at which A. L. Beall, Vacuum Oil Company, will preside as chairman, and the other to the discussion of transportation, at which F. K. Glynn, American Telephone & Telegraph Company, will preside. A Diesel engine session will be held in the evening with W. F. Joachim, Westinghouse Electric and Manufactuing Company, presiding.

At the fuel session, a paper, "Further Developments in Determining Gum in Gasoline," by O. C. Bridgeman and E. W. Aldrich, Bureau of Standards, will be presented. "Fuel Line Temperature in 1931 Motor Cars," by O. C. Bridgeman and H. S. White, Bureau of Standards; "The Interpolation Method in Detonation Testing," by D. B. Brooks, Bureau of Standards; "Carburetor Design for the Fuel Research Detonation Engine," by C. S. Kegerreis, consulting engineer, Toledo, will also be read at this session.

Bridgeman's and Aldrich's paper will bring up to date the forecasting of gum forming possibilities of given fuels for use in internal combustion engines. The presentation on fuel line temperatures will furnish a summary of the work of the past few years as regards the relationship between car design and the design of fuel feed systems as they affect vapor lock in carbureting present-day automobile engines. The results of tests on cars of recent models will be discussed in terms of vapor pressure, and suggestions will be made regarding improvement in the design of fuel feed systems, which will tend to lower fuel temperatures. Brook's paper presents the discussion of the permissible interpolation intervals for detonation testing as affected by octane number, engine and adjustment of the bouncing-pin method. Kegerreis will present in his paper specific design and performance figures on a special carburetor that provides essentially a constant mixture ratio for different throttle positions. The carburetor to be discussed was developed for use in connection with the fuel research engine to be used by various co-operating laboratories.

In his discussion of the utilization of motor coaches, D. A. Smith, Department of Street Railways, Detroit, presents the types of motor coaches now used, the utility of the various types, and points out some of the needs for improvements in motor coach design.

A brief history of Diesel engine fuel oil, its manufacture and data relative to controlling combustion in high-speed Diesel engines and on the physical and chemical characteristics of some Diesel engine fuels with test results, will be presented in the paper by W. H. Butler, Standard Oil Company of New Jersey. At the Diesel engine session, also, Erich Sandner, consulting engineer, Dortmund, Germany, and J. B. Frauenfelder, consulting engineer, Philadelphia, will present a paper, "Practical Experience With Devices for Damping Torsional Vibration." This paper presents a brief review of the history of early difficulties resulting from torsional vibration in marine and Diesel engines. The authors discuss several types of dampers and their effectiveness, dwelling especially on damping flywheels with hydraulic couplings.

Tuesday, the third day of the meeting, the morning session will feature discussions of passenger car bodies, at which L. C. Hill, president and general manager Dietrich, Inc., will preside. "Comfort and Interior Appointments" is the subject of a paper by H. A. Brunn, Brunn & Co., Inc. This promises to be an interesting discussion of the means to provide what every motorist expects—a comfortable ride in a car having a tasteful interior. R. F. Anderson, Murray Corporation of America, in his paper, "Chassis Design Data Which Body Engineers Need," calls attention to the fact that in drafting plans for 1933 cars more attention should be given to the factors in chassis design that are most vital to the body designer, for each type of body model the line may include and points out that co-operation is necessary between the body designer and chassis engineer.

The evening session, devoted to passenger cars, will have as chairman W. C. Keys, Detroit. The two papers to be presented at this session are "The Tear-Drop Car," by W. T. Fishleigh, consulting engineer, Detroit, and "Driving High-Speed Cars," by J. E. Hale, Firestone Tire and Rubber Company. In developing the paper on "The Tear-Drop Car," Fishleigh traces the design changes chronologically with illustrations up to the present time. Taking the closed sedan as an example, the author points to a surprising similarity in general outline, general arrangement and general aerodynamic non-adaptability to high-speed travel through air between models produced in 1913 and current models. The paper, profusely illustrated, promotes the advantages to be gained by the adoption of streamlines and concludes that today high-speed and economy with maximum comfort are demanded, and states that the automotive industry has the solution in the rear engine, low center of gravity, streamline car.

The problems of high-speed driving and their solution, in terms of driver, vehicle and builder responsibility, will be the high lights of Mr. Hale's paper.

A water carnival has been arranged to start at 10.30 p. m. A session devoted to future developments, with W. J. Davidson, General Motors Corporation, presiding, on Wednesday, will offer "The Field for Synthetic Lubricating Oils," by F. W. Sullivan, Jr., V. Voorhees, P. T. Oak and D. P. Barnard, Standard Oil of Indiana, and "The Case in Favor of Cars With Rear Engine Mountings," by Herbert Chase, Product Engineering and American Machinist. Synthetic oils are a recent development in the lubricating field, and the paper devoted to this subject will incorporate a comprehensive exposition of the physical properties and uses of these oils, as well as performance data and the possibilities of these new products as applied to automotive mechanism.

The considerations which have been given to the creation of new body designs of streamline form as a departure from the conventional, which has existed, except for modification, over a long period of years, has focused more interest in the possibilities for developing these new body styles by mounting the engine at the rear. In addition to the latitude permitted in reshaping the automobile body, other advantages to be derived from mounting the engine at the rear, it is claimed, include greater passenger space and comfort, reduced noise, heat and odor, more compact and better balanced engines, concentration of power and transmission parts, decreased weight, as well as others which will be detailed in this presentation.

During the morning, also, the Standards meeting, with Arthur Boor, Willys-Overland, Inc., presiding, will be held, at which reports of the various divisions will be presented and acted upon.

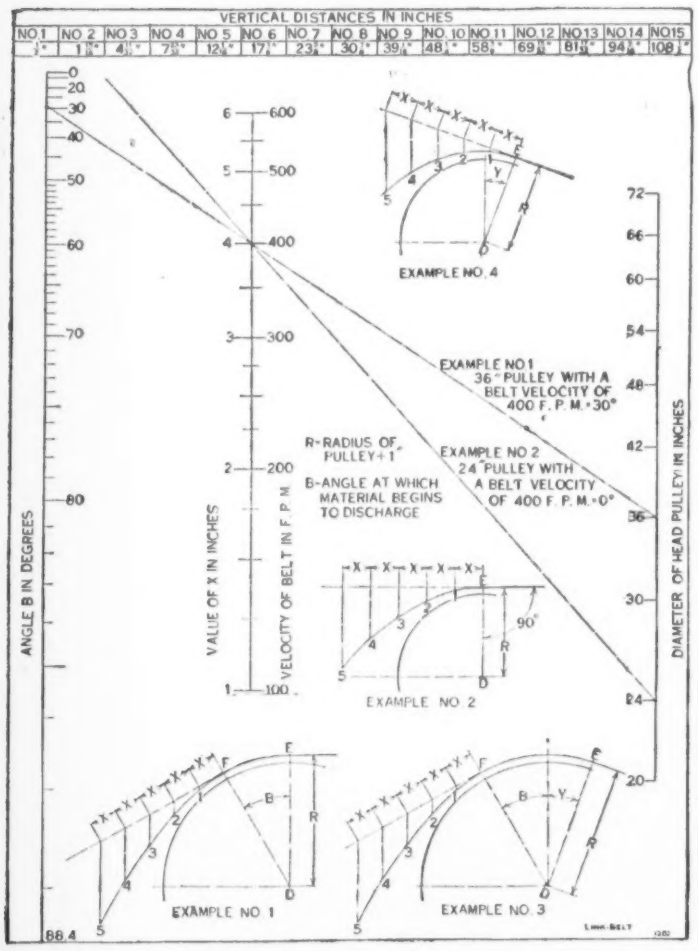
The afternoon will constitute a field day, when the members will be permitted to get away from the technical side in order to relax in sports.

President Vincent Bendix, Bendix

(Continued on Page 11)

Equipment - - - Development

Belt Conveyor Trajectory Chart and Data


VERTICAL DISTANCES IN INCHES
NO 1 NO 2 NO 3 NO 4 NO 5 NO 6 NO 7 NO 8 NO 9 NO 10 NO 11 NO 12 NO 13 NO 14 NO 15
ANGLE B IN DEGREES
VALUE OF X IN INCHES
VELOCITY OF BELT IN F. P. M.
DIAMETER OF HEAD PULLEY IN INCHES
EXAMPLE NO 1
36" PULLEY WITH A BELT VELOCITY OF 400 F. P. M. = 30°
EXAMPLE NO 2
24" PULLEY WITH A BELT VELOCITY OF 400 F. P. M. = 0°
R-RADIUS OF PULLEY + 1"
B-ANGLE AT WHICH MATERIAL BEGINS TO DISCHARGE
EXAMPLE NO. 4
EXAMPLE NO. 2
EXAMPLE NO. 1
EXAMPLE NO. 3
88.4

Belt Conveyor Trajectory Chart, Courtesy of Link-Belt Company, Chicago, Ill.

The following data and chart were prepared by the Link-Belt Company, Chicago, Ill. It constitutes material handling and power transmission data sheet No. 1 of a series to be prepared by the Link-Belt Company.

In locating the chute to receive the discharge from a belt conveyor, it is often desirable to take into account the trajectory, or parabolic path the material will take under the combined influences of gravity, speed of belt in feet per minute and diameter of head pulley in inches.

The somewhat complicated formulae involved have been worked out in the convenient chart.

The vertical scales of the chart are so proprotioned in their divisions, and relative locations, that the use of a straight edge will furnish much of the desired data. The right hand scale shows diameters of head pulleys in inches. The inside scale shows velocities of conveyor belts in F. P. M. on one side of the line, and on the other side, a value X, which is of a convenient length to use for dividing the tangent line (explained later) into sections, furnishing division points from which to measure vertical drops in inches (listed in the tabulation at top of chart). The lower ends of these vertical lines are points through which the trajectory curve is to be drawn.

The scale at left is used for finding value of angle B, which measures the arc of contact of the material on the head pulley (starting at the vertical radius DE). Lay straight edge or taut string across the scales at points indicating the diameter of pulley and velocity of belt involved. The extension through left hand scale shows corresponding value of angle B.

Starting with an imaginary line representing the straight path of the conveyor as it approaches the head pulley, locate a base radius line (DE) at right angles to the conveyor line, letting it equal in length the pulley radius plus 1 inch, or radius item R, assumed as the effective distance of the load from center of the pulley.

With radius R, inscribe an outer arc, EF, through which the material remains in contact with the belt on the pulley, and draw secondary radius line, DF. The angle, B, is formed by radii DE and DF. At intersection, F, draw a tangent line, from which to drop vertical lines to locate the trajectory.

Divide the tangent into sections representing the length of X in each case. From the division points drop vertical lines of lengths given at top of chart. For instance, at end of section No. 1, ½ inch; at No. 2, 1⅛ inches; at No. 3, 4½ inches, and so on through as many sections as may be required for determining enough of the trajectory to locate the chute properly.

Examples

In Example 1 the conveyor is horizontal, the pulley 36-inch diameter and the belt speed 400 f. p. m. A straight line through 36-inch diameter and 400 f. p. m. (on the chart) intersects the degree line B at 30 degrees. The tangent line is drawn from the intersection (F) of the outside circle made by R, with the line (DF), which indicates the side of angle B.

The tangent line is divided into sections X, equaling 4 inches each, and from the division points, lines are dropped vertically to the distances indicated at top of chart, namely, ¾ inch for No.1, 1⅛ inches for No. 2,4 11-32 inches for No. 3, and so on through as many points as are necessary to determine the path of the material until it reaches the chute you intend using.

In Example 2, a horizontal conveyor having belt speed 400 f. p. m., and head pulley 24-inch diameter, the line does not indicate any degrees for an angle B, and the material would leave the pulley at its top. The tangent line would be a continuation of the conveyor surface, counting the effective distance of the load from center of pulley as being 1 inch above the face of the pulley, as previously explained.

Examples 3 and 4 introduce the modifying influence of an inclined instead of horizontal path for the conveyor as it approaches the head pulley, and the effect of the velocity on this item.

To determine whether the load will start to leave the pulley at E or at F, find an indicator figure by the following formula:

$$\text{Indicator figure} = \frac{V^2}{G \times R \times \cos Y}$$

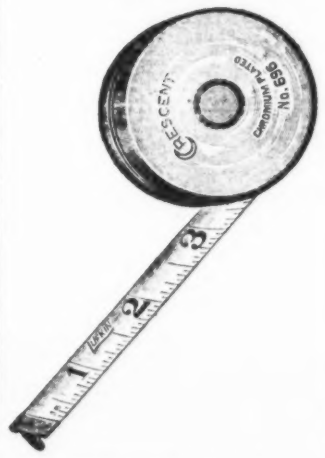
Where V = Velocity in feet per second. G = Action of Gravity, or 32.16 feet per second. R = Radius "R," measured in feet. Y = Angle of inclination of conveyor. If the indicator figure is less than 1, the trajectory begins at F (Example 3), angle B remaining the same as for a horizontal belt (30° in this case). If the indicator figure is more than 1, the trajectory begins at E, as in Example 4.

In Example 3, using same data as in Example 1, except that the conveyor is inclined 20° (equaling angle Y), the indicator figure from formula is less than 1, and trajectory starts at F (30° to the left from the vertical radius line).

In Example 4, using same data as in Example 2, except for an incline of 20°, the result of the formula is greater than 1, and trajectory starts at E, at an angle of 20° to the right from the vertical radius line.

(Courtesy of Link-Belt Company, Chicago)

NEW LUFKIN TAPE COMBINES RIGIDITY AND FLEXIBILITY



CRESCENT tape rule

A six-foot measure which, the manufacturer states, combines the convenience of a pocket tape with the utility of a rule has just been brought out by the Lufkin Rule Company, Saginaw, Mich. It is known as the Crescent tape rule. It winds automatically and is inclosed in a two-inch case. When withdrawn it is rigid, but may be flexed for making measurements if desired. The No. 696 is marked in 16ths inch; the 696D is markeed in 10ths and 100ths feet. The measures are nickel-plated with dark markings. Case is chrome plated and has a spring winding device with ratchet stop. Price, $3.

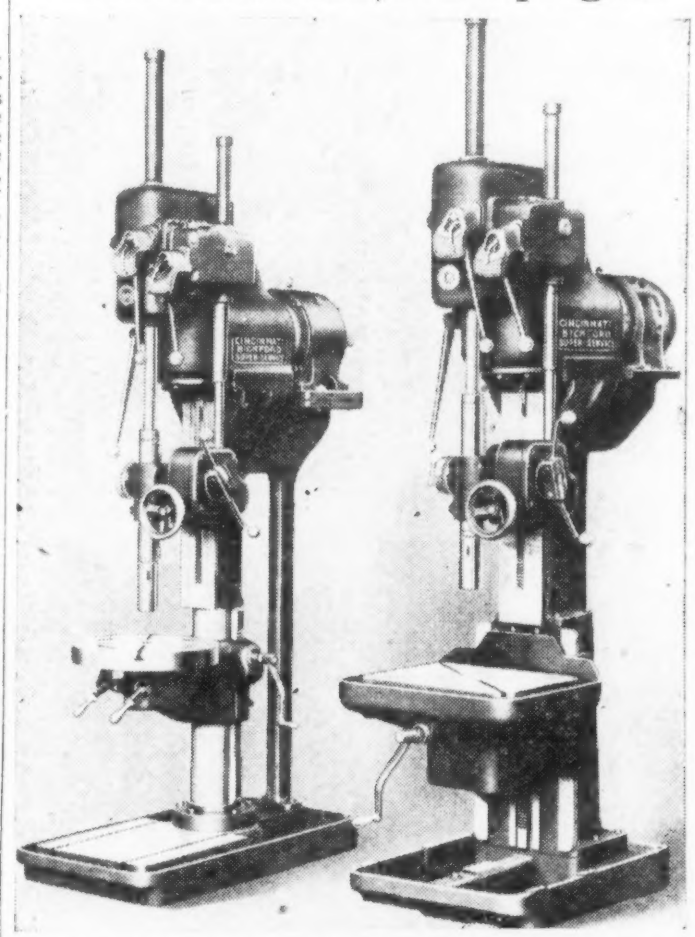
A. S. A. HOLDS ANNUAL MEETING AND DINNER; INSTALLS OFFICERS

New York, June 12.—The annual meeting and dinner of the American Service Association was held at the Traffic Club, Park Central Hotel, last night. This is the annual social event of the service association. Features of the evening were the installation of new officers and directors and an illustrated lecture and entertainment.

A. M. Welch, formerly branch manager of Dodge Brothers, New York, Inc., presented the illustrated lecture of a trip around the world in which 150 stereopticon slides were shown.

The new officers and directors installed were as follows: President, R. B. Lawrence, service manager, Studebaker Corporation of America, New York; vice-president, John F. Creamer, Wheels, Inc.; J. F. McMann, vice-president of engineering Parmalee Transportation Company, New York; Edward F. Sullivan, assistant service manager, Warren-Nash; and Louis W. Martin, branch manager United Motors Corporation, New York; secretary, Charles Michaels, Michaels & Moore; treasurer, R. J. Adams; directors, Frank E. Dawson, Mathew J. Farrell, G. W. Stroh, A. B. Cumner, Thomas Hilton, Louis K. Teller. The latter was appointed to fill out the unexpired term of Mr. Lawrence, who resigned to assume the duties of president.

Cincinnati-Bickford Uprights



NEW UPRIGHT drilling machines introduced by the Cincinnati-Bickford Tool Company, Cincinati, O., and announced in the June Bickford Tool Company, Cincinnati, O., and announced in the June 11 edition of the Automotive Daily News, are built in either round

ALUMINUM INDUSTRIES EXTENDING CAMPAIGN

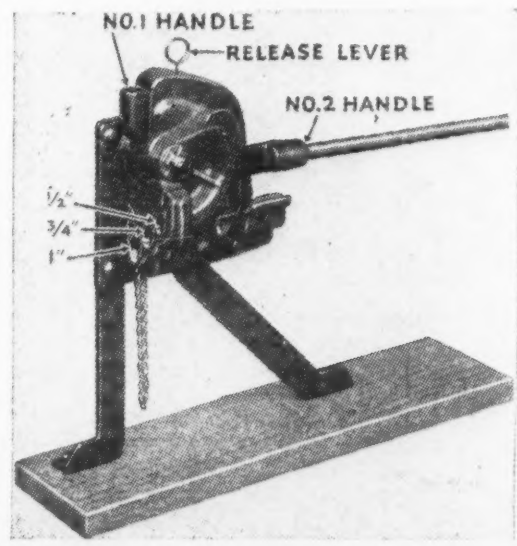
Cincinnati, June 12.—In line with its policy, announced the first of the year, Aluminum Industries, Inc., has extended its educational campaign among parts and repair men into the West and Far West, with gatherings, sponsored by jobbers in key cities throughout that section of the country. An enthusiastic meeting was held at Portland recently under the auspices of the West Bearing Company and the Motor Equipment Company, at which 250 garage men were present, to hear W. H. Washburne, field engineer for Aluminum Industries, and R. E. McGill, Western manager.

LINDSEEN MAKING TWO NEW PIPE BENDERS

A new thirty-ton hydraulic pipe bender and a hand type pipe bender have been introduced by Gustave Lindseen, Inc., Chicago, Ill.

The hydraulic type will accomodate eleven sizes, ranging from ½ in. to 4½ in. diameter. It is priced at $292.

The No. 1 hand type bender is sturdily constructed and will bend pipe, tubes or conduits without kinks or distortion, the manufacturer claims. It is easily mounted on a bench or other suitable mounting. It has two handles, one direct acting, which is used principally for ½ and ¾ in. diameter, and a second, which is used for 1 in. diameter, as well as those of smaller sizes. With the ratchet and toggle attachment, the use of the second handle will complete a 90 deg. bend with four or five strokes. Price, with stand, $49.50; without stand, $45.



LINDSEEN hand type bender

Who's Who at the S. A. E. Summer Meeting

(Continued from Page 7)

Lane, F. J., Alemite Corporation.
Lane, Mrs. F. J., Detroit, Mich.
Larson, C. M., Sinclair Refining Company.
Lautz, Carl F., Houde Engineering Corporation.
Ledwinka, J., E. G. Budd Manufacturing Company.
Lee, Walter E., Standard Oil Development Company.
Lemon, B. J., United States Rubber Company.
Leonard, Simpson C., Jr., Michigan Leather Packing Company.
Leonard, Mrs. S. C., Jr., Detroit, Mich.
Lewis, G. W., National Advisory Committee for Aeronautics.
Lichty, L. C., Yale University.
Lisle, F. J., Jr., Holley Carburetor Company.
Loos, A. L., Motor Products Corporation.
Love, E. F., Handy Governor Corporation.
MacArthur, Alex, Toronto Transportation Commission.
McCain, George L., Chrysler Corporation.
McCain, Mrs. George L., Detroit, Mich.
McCall, Charles D., Muncie Products Division of General Motors Corporation.
McCormick, Mrs. Charles D., Detroit, Mich.
McCormick, Miss Judy A., Society of Automotive Engineers.
McCuffee, J. H., Prest-O-Lite Storage Battery Company.
McIntyre, J. J., Cleveland Graphite Bronze Company.
McLaughlin, C. J., Guide Motor Lamp Company.
Mansfield, Neil, Texas Company.
Marks, E. S., H. H. Franklin Manufacturing Company.
Marks, Mrs. E. S., Syracuse, N. Y.
Marley, S. P., Mellon Institute.
Marley, Mrs. S. P., Pittsburgh, Pa.
Marschner, F. W., New Departure Manufacturing Company.
Marschner, Mrs. F. W., Detroit, Mich.
Martin, Frank H., Stewart-Warner Company.
Mason, C. R., New Jersey Zinc Company.
Mason, Mrs. C. R., New York city.
Maynard, H. E., Chrysler Corporation.
Maynard, Mrs. H. E., Detroit, Mich.
Mears, B. B., Henry L. Doherty & Co.
Messinger, F. W., Norma-Hoffmann Bearings Corporation.
Michel, C. A., Guide Lamp Corporation.
Michel, Mrs. C. A., Anderson, Ind.
Middleworth, Henry V., Consolidated Gas Company of New York.
Middleworth, Mrs. Henry V., New York city.
Miller, C. W., Wilcox-Rich Corporation.
Miller, Wallace T., Motor Wheel Corporation.
Miller, Mrs. Wallace T., Lansing, Mich.
Mills, Frank, Cleveland, O.
Monjar, J. G., Detroit Gear and Machine Company.
Monjar, Mrs. J. G., Detroit, Mich.
Morrison, R. L., Bendix-Westinghouse Automotive Air Brake Company.
Moss, F. A., George Washington University.
Moss, F. H., Jr., Wilcox-Rich Corporation.
Moss, Mrs. F. H., Jr., Detroit, Mich.
Moyer, Guy W., Society of Automotive Engineers.
Mougey, Harry C., General Motors Corporation Research Laboratories.
Murphy, Ralph, H. H. Franklin Manufacturing Company.
Murphy, Mrs. Ralph, Syracuse, N. Y.
Murray, C. E., Willard Storage Battery Company of Canada, Ltd.
Nichols, R. J., Willard Storage Battery Company.
Nightingale, Mrs. R. J., Cleveland, O.
Nuth, A. C., J. H. Williams & Co.
Nuth, Mrs. A. C., Buffalo, N. Y.
Nutt, Arthur, Wright Aeronautical Corporation.
Nutt, Harold, Borg & Beck Company.
Oberg, W. C., Detroit, Mich.
Oestermeyer, Carl F., Willard Storage Battery Company.
Ogren, Carl F., Thermoid Rubber Company.
Olley, Maurice, Cadillac Motor Car Company.
Olley, Mrs. Maurice, Detroit, Mich.
Olley, Miss Diana Marie, Detroit, Mich.
Olley, Orwick, R. E., Lapeer & Trailmobile Company.
Parker, Orrel A., Parker Wheel Company.
Parker, Mrs. Orrel A., Cleveland, O.
Parkhurst, E. H., Columbia Axle Company.
Parsons, Harry, Strom Bearings Company.
Patch, E. S., Moraine Products Company.
Patch, Mrs. E. S., Dayton, O.
Pearson, J. W., Automotive Research Corporation.
Peat, Leslie, Chilton Class Journal Company.
Peck, T. A., East Greenwich, R. I.
Pierce, P. P., Vacuum Oil Company.
Poock, L. F., Dayton, O.
Poock, Mrs. L. F., Dayton, O.
Poole, Alfred J., United American Bosch Corporation.
Poole, Mrs. Alfred J., New York city.
Porter, H. K., Hyatt Roller Bearing Company.
Potter, E. Lee, Gabriel Company.
Prescott, F. H., Delco-Remy Corporation.
Prescott, Mrs. F. H., Anderson, Ind.
Pulcher, M. L., Federal Motor Truck Company.
Ralls, Geo. H., Gabriel Company.
Ray, C. Paul, Cleveland, O.
Ray, Mrs. C. Paul Jr., Cleveland, O.
Ray, Doris, Cleveland, O.
Rector, Clinton, Bakelite Corporation.
Reid, H. J. E., National Advisory Committee for Aeronautics.
Rodgers, G. C., Bureau of Standards.
Round, Geo. A., Vacuum Oil Company.
Rushmore, S. W., Rushmore Laboratories.
Ryan, J. T., Mack Truck Company.
Salzman, Geo. S., Cleveland Graphite Bronze Company.
Sanborn, E. E., Vacuum Oil Company.
Saurer, C., Firestone Tire and Rubber Company.
Scaife, A. J., White Motor Company.
Scaife, Mrs. A. J., Cleveland, O.
Schatz, H. A., Federal Bearings Company, Inc.
Schatz, Mrs. H. A., Poughkeepsie, N. Y.
Schatz, Miss Helen, Poughkeepsie, N. Y.
Schell, Carl A., Thermoid Rubber Company.
Schlessmann, C. H., Standard Oil Company.
Schon, Pierre, General Motors Truck Company.
Scott, L. J., Thompson Products, Inc.
Schwitzer, Louis, Schwitzer-Cummins Company.
Schwitzer, Mrs. Louis, Indianapolis, Ind.
Sergardi, F., Reo Motor Car Company.
Sevald, G. V., Thompson Products Company.
Sharpe, Frank A., Thermoid Rubber Company.
Shea, J. B., Firestone Tire and Rubber Company.
Shidle, Norman G., Chilton Class Journal Company.
Shields, J. W., Firestone Tire and Rubber Company.
Skinner, Arthur A., Leece-Neville Company.
Skinner, Mrs. Arthur A., Cleveland, O.
Skinner, Clarence, Motor Wheel Corporation.
Skinner, Mrs. Clarence, Lansing, Mich.
Smith, F. A., Oakes Products Corporation.
Smith, J. Henry, E. I. DuDont de Nemours & Co.
Smith, Mrs. J. Henry, Detroit, Mich.
Smith, T. C., American Telephone and Telegraph Company.
Smith, Tucker, Hill Engineering Company.
Sneed, John, Steeldraulic Brake Corporation.
Snow, H. C., Auburn Automobile Company.
Spray, J. W., Timken Roller Bearing Company.
Spray, Mrs. J. W., Canton, O.
Steeneck, R. F., Fainir Bearing Company.
Stevens, N. B., Firestone Tire and Rubber Company.
Stewart, J. B., Vacuum Oil Company.
Stoope, H. J., Motor Products Company.
Stout, William B., Stout Engineering Laboratories, Inc.
Sullivan, W. B., Michiana Products Corporation.
Swope, Dr. Ammon, Purdue University.
Taub, Alex, Chevrolet Motor Company.
Taub, Mrs. Alex, Detroit, Mich.
Teetor, Macy O., Perfect Circle Company.
Teetor, Ralph R., Perfect Circle Company.
Teetor, Mrs. Ralph R., Hagerstown, Ind.
Telford, F. W., Goodyear Tire and Rubber Company.
Tillotson, H. C., Tillotson Manfucturing Company.
Tillotson, Mrs. H. C., Toledo, O.
Tuttle, J. C., Goodyear Tire and Rubber Company.
Underwood, A. J., Society of Automotive Engineers.
Vail, E. L., Jaeger Watch Company, Inc.
Veal, C. B., Society of Automotive Engineers.
Wales, E. A., Raybestos-Manhattan, Inc.
Wales, Mrs. E. A., Cleveland, O.
Wall, William G., Indianapolis, Ind.
Walmsley, Miss G., Society of Automotive Engineers.
Warner, E. P., McGraw-Hill Publishing Company, Inc.
Warner, Mrs. E. P., New York city.
Warner, J. A. C., Society of Automotive Engineers.
Waters, G. W., Timken Roller Bearing Company.
Watson, Harvey, Hyatt Roller Bearing Company.
Weed, Hugh H. C., Carter Carburetor Corporation.
Welty, G. C., Aluminum Company of America.
Wemp, E. E., Long Manufacturing Company.
Wennerlund, E. K., General Motors Corporation.
White, H. S., Bureau of Standards.
Whitney, C. S., Willard Storage Battery Company.
Whitney, Mrs. C. S., Detroit, Mich.
Whittelsey, C. B., Society of Automotive Engineers.
Wickenden, Thomas H., International Nickel Company.
Wickenden, Mrs. Thomas H., New York city.
Wilkin, R. E., Standard Oil Company (Indiana).
Wilkinson, R. L., Delco Products Corporation.
Willett, E. F., Automotive Fan and Bearing Company.
Willett, Mrs. E. F., Detroit, Mich.
Williams, C. V., Delco Products Corporation.
Wilson, Roy J., Mack International Motor Truck Corporation.
Winchester, J. F., Standard Oil Company of New Jersey.
Wine, L. A., Detroit, Mich.
Wine, Mrs. L. A., Detroit, Mich.
Winkler, H. E., Schwitzer-Cummins Company.
Winkler, Mrs. H. E., Indianapolis, Ind.
Wolf, Austin M., New York city.
Woodbury, A. C., Society of Automotive Engineers.
Woolson, H. T., Chrysler Corporation.
Woolson, Mrs. H. T., Detroit, Mich.
Worden, V. C., Carter Carburetor Corporation.
Wotowitch, R. A., Henry L. Doherty & Co.
Young, F. M., Young Radiator Company.
Young, O. W., Hyatt Roller Bearing Company.

N. A. C. C. CONFERENCE OF TRAFFIC MANAGERS IN DETROIT, JUNE 23

(Continued from Page 1)

to second class, L. C. L., fourth class, C. L., minimum weight 30,000 pounds, on hub caps, other than iron or steel, filed for July hearing, and petition for a carload rating of second class, minimum weight 18,000 pounds, on plush, velours, cloth and cotton corduroy, filed for similar hearing.

Other matters to be considered are: Boxed automobiles and parts for export being shipped to New York via Great Lakes and New York Barge Canal at lower rates than via rail; mixed carloads of automobile parts from United States to Canada; wooden packing box and crate material for automobile export shipments; status of further contact with official classification committee on charges on trucks or chassis not to exceed charges on passenger automobile basis.

Rating the Motor Truck

(Continued from Page 6)

turer who rates a 5,300-pound truck at 1½ tons looks at the rating problem from a different viewpoint than the manufacturer who rates a 2,400-pound truck at 1½ tons.

The sales department prefers a higher rating as a talking point in merchandising the product, while the engineering and service departments, thinking in terms of strength of materials, carrying capacity, tractive ability and endurance, prefer a more conservative rating that will assure longer life and greater freedom from failure.

Under such conditions, ratings are so misleading with respect to actual performance that many large operators ignore manufacturers' ratings in determining the ability of a truck, and as long as ratings are fixed by different types of minds, viewing the matter from different angles, the present inconsistencies will prevail. The rating problem will be solved only when it is removed from prejudiced departmental influence and considered strictly from the standpoint of performance on the open highways.

How, then, can we put real meaning into truck ratings? A truck functions in two ways. It carries a load and propels it over the road; therefore it is necessary primarily to consider two factors in fixing a truck rating—capacity and traction.

Unquestionably a direct relationship exists between truck weight and carrying capacity. True, it is possible to build a heavy axle of relatively small carrying capacity and a light axle of relatively great carrying capacity, but in the present advanced stage of design and manufacture the heavier axle, in general, will be uniformly larger and stronger throughout than the smaller one. What is true of axles is true of other units.

Formulas for Rating

Since there is a direct relationship between truck weight and carrying capacity, a well-balanced chassis should be able to carry a certain number of times its own weight. This relationship might well be recognized in fixing truck ratings. Consideration should be given to the development of a method or formula that would make the gross allowable weight or carrying capacity of a truck the product of the weight of the chassis, fully equipped, multiplied by a constant.

The tractive capacity of the vehicle might be determined by a somewhat similar formula. Tractive capacity proceeds primarily from engine power. In general, the engine should develop sufficient power to propel the loaded truck with normal transmission and rear-axle reductions. Engine torque is a reliable truck-power index. Tractive capacity to propel the gross allowable weight with such reductions might be the engine torque multiplied by a constant that would give a product which would equal the gross weight.

As an example, assume a truck that weighs 6,550 pounds, and arbitrarily assign a constant of two and one-half as the multiplier, for determining its gross allowable weight. The product is 16,375 pounds. In round figures, then, the gross allowable weight of this hypothetical truck is 16,000 pounds. Assuming a 2,000-pound body, the payload would be 7,450 pounds, and a conservative rating would designate it as a two and one-half to three-ton truck.

In like manner, as an example of the determination of tractive capacity, assume a tractive capacity constant of 80; that is, let us assign a load of eighty pounds to each unit of engine torque. If each unit is to propel eighty pounds, and the gross allowable weight that must be propelled is 16,000 pounds, the torque required to drive the load would be 16,000 divided by eighty, or 200 foot-pounds.

I am not recommending these examples as definite formulas for fixing carrying and tractive capacities, although a check against a well-balanced truck would disclose that approximations of these formulas might be used. Formulas based on these suggestions, and developed by a group of engineers representative of the industry, would provide a rating method that would make possible intelligent comparison of the performance to be expected from well-balanced design in any truck capacity.

It may be argued that the formulas give only approximations, which is true. At present, however, we do not have even approximations, and surely an approximation, which many formulas are, is infinitely better than nothing. It may also be contended that the formulas have no scientific basis, in which I fully concur. The purpose of these formulas is to provide a simple, practical method of appraising truck capacities, a method that can be understood and used by the truck dealer, salesman and operator as well as the manufacturer. Any method or formula designed for such use must be simple.

A Suggested Basis for Rating The Ability of Motor Trucks

(Continued from Page 6)

motor truck, as a rule, is operated with loads that can be handled in high or direct gear most of the time. High gear should be defined as the greatest numerical gear-ratio in which the vehicle was designed to operate continuously. The transmission reductions are intended for accelerating the load from rest or in negotiating grades or places that occur a small percentage of the running time. This being true, our yardstick should be used for determining the gross vehicle weight in high gear when this weight is being used for comparison or rating purposes.

Let us refer to the Commercial Car Journal of May, 1931, and select two trucks under the 1½-ton classification. The first has an engine of 195 cubic inches a 5.40:1 gear-ratio in high, 30 x 5-inch tires, and a chassis weight of 2,900 pounds. If we use our Formula (1) for 4, 5, 6 and 7 per cent. grades, multiply the number of cubic inches of piston displacement by 7.8 to get the torque in inch-pounds, taking 0.85 efficiency and 0.015 pound per pound of rolling resistance as standard conditions, we find that:

As a tractor with a semi-trailer, it will handle an 8,100-pound gross train weight up a 4 per cent. grade.

As a truck, it will handle a 6,900-pound gross vehicle weight up a 5 per cent grade.

As a truck, it will handle a 5,950-pound gross vehicle weight up a 6 per cent grade.

As a truck, it will handle a 5,350-pound gross vehicle weight up a 7 per cent. grade.

The second truck selected for comparison has an engine of 315 cubic inches displacement, a 6.5:1 gear-ratio in high, 32 x 6-inch tires, and a chassis weight of 4,700 pounds. Using Formula (1) as before, we find that:

The gross vehicle weight for a 4 per cent. grade will be 15,500 pounds; for a 5 per cent. grade, 13,100 pounds; for a 6 per cent. grade, 11,300 pounds; for a 7 per cent. grade, 10,000 pounds.

So we find that truck No. 1 will handle 7,000 pounds gross vehicle weight up a 5 per cent grade, which I regard as equivalent to very favorable conditions, while truck No. 2 will handle 13,000 pounds under the same conditions. The yardstick has shown us the difference, although both are called 1½-ton trucks.

In closing, I propose that trucks be rated by the gross vehicle weight that can be hauled up standard grades and suggest that a 4 per cent. gradient represent tractor and trailer service, 5 per cent. gradient represent favorable service, 6 per cent. gradient represent average service, 7 per cent. gradient represent heavy duty service and 85 per cent. efficiency and 0.015 pounds per pound of gross vehicle weight be the rolling resistance.

If this is followed, we shall know what is meant when the rating of a truck is specified.

Delivering Oils and Gasoline Profitably

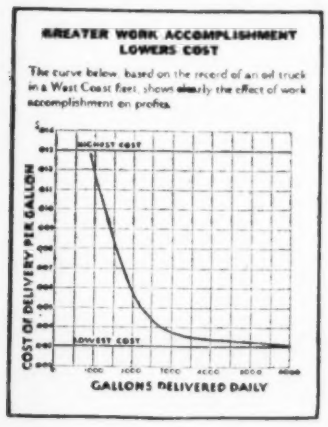
With summer and its accompanying increase in demand for automobile lubricants and fuels well on its way, the following survey on "Delivering Oils and Gasoline Profitably," which was compiled by the General Motors Truck Company, Pontiac, Mich., should be of particular interest. The full text of the report covering the facts brought out during the survey is appearing serially in Automotive Daily News. The report in pamphlet form is also available at all General Motors Truck Company dealers and distributorships.

A TRUCK'S work accomplishment must be measured in terms of load delivered and distance covered—"gallon-miles" or "pound-miles." Greater gallonage or poundage means increased profit, so long as the truck is not overloaded. Greater mileage, on the other hand, means higher cost for each gallon delivered.

Getting work accomplished economically, therefore, means getting a maximum volume of sales out of a minimum delivery mileage. Only when a truck is producing its maximum output on this basis is the truck being operated economically.

The importance of this rule cannot be over-emphasized. The average petroleum products distributor operates his fleet of trucks, at least a part of the time, under conditions which are wasteful because only a few trucks are producing their maximum output of work.

For example, an Atlantic coast distributor has established an efficiency rating for his trucks based on miles covered, gallons delivered, number of stops, and the capacity of the truck. A standard of 100 per cent. performance, based on the average performance of his fleet for eight years, is used as a measuring stick on each type of de-


GREATER WORK ACCOMPLISHMENT LOWERS COST
The curve below, based on the record of an oil truck in a West Coast fleet, shows clearly the effect of work accomplishment on profits
HIGHEST COST
LOWEST COST
COST OF DELIVERY PER GALLON
GALLONS DELIVERED DAILY

livery. This operator has found, by careful application of this efficiency rating, that [illegible] from 130 to 140 per cent. normal efficiency during rush seasons, even when overtime is excluded in calculations. And, on the other hand, the average of his fleet during off seasons for each product handled is only about 50 to 60 per cent. Such a tremendous variation in operating efficiency as is shown by these figures indicates clearly that there is much waste effort and that trucks and drivers are not producing their maximum work output a large portion of the time.

There are three common sources of low work efficiency in the average distributor's truck operation, each of which should be the subject of careful study, with a view to eliminating losses and increasing the work output of each truck in operation. They are:

1. The demand for underload deliveries.
2. Fluctuations in sales volume.
3. Uneconomical sales direction.

Each of these losses, of course, involves loss of time as well as loss of work, but they arise largely from the distribution of the work to be accomplished by the trucks, rather than from careless or inefficient use of time. Let us see what the distributor can do to reduce truck-operating losses from these three sources.

Reducing Underload Deliveries

Every time a truck leaves the distributor's station with less than its capacity load of products to be delivered the distributor is making less than a full profit on the trip. Underload deliveries cannot be eliminated entirely so long as special deliveries, demands for extra service and fluctuations in volume occur. But many distributors seem to make little or no effort to lower the number of lesss-than-capacity loads delivered, with the result that their average loads, day in and day out, sometimes fall as low as 60 per cent. of full capacity.

Better Supervision of Dispatch Needed

For the most part, excessive losses from underload deliveries arise solely from lack of careful supervision and direction in dispatching trucks. A customer calls in, demands immediate delivery of fifty gallons of oil or a few hundred gallons of gas, and the individual who handles the order has only one aim—to meet the customer's demand by sending out the first available truck. Several instances were observed during the investigation where careless control of this sort actually resulted in dispatching a truck with a small special delivery when there were other orders on hand going in the same direction.

There is only one satisfactory answer to control of these losses—closer supervision of dispatching and routing of trucks. Haphazard handling of orders—putting them through for delivery without study of the most economical method of handling—is bound to produce waste.

This survey uncovered a number of other methods being used by successful distributors to control underloading. They are as follows:

1. Mail advertising and sales campaigns aimed to increase the number of "keep full" customers. With a large percentage of "keep full" customers, the distributor can send out trucks fully loaded without risking a high percentage of return loads.

2. Mail campaigns and selling effort aimed to encourage early ordering. It is the last minute order with a demand for immediate delivery that encourages underload trips, especially in lubricating and fuel oil deliveries.

3. Driver bonuses, based on per cent. of capacity used and per cent. of load returned on each trip. If the driver is encouraged to take out full loads each trip and is penalized for excessive returns, the result will be less underloading.

4. Driver sales training designed to teach drivers how to dispose of the remaining load economically when capacity loads are taken out without advance orders to cover them.

Every distributor should keep an accurate record of the per cent. of truck capacity used each trip and per cent. load returned. Every effort should be made to increase the per cent. of capacity delivered on each trip.

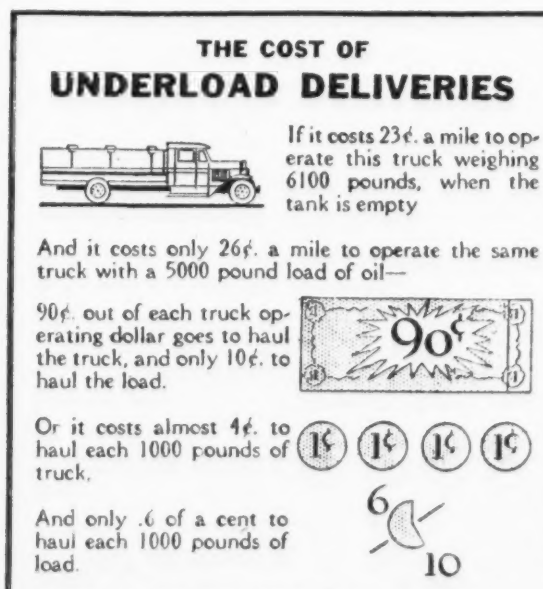
(To be Continued)

A USEFUL FORMULA

$$\frac{G \times 100}{N \times C} = \% \text{ OF CAPACITY USED}$$

G = gallons (or pounds) delivered. N = number of trips required. C = capacity of truck required.

Apply this formula to each truck in the fleet at the end of each week. Concentrate on increasing the per cent of capacity used.


THE COST OF
UNDERLOAD DELIVERIES
If it costs 23¢. a mile to operate this truck weighing 6100 pounds, when the tank is empty
And it costs only 26¢. a mile to operate the same truck with a 5000 pound load of oil—
90¢. out of each truck operating dollar goes to haul the truck, and only 10¢. to haul the load.
90¢
Or it costs almost 4¢. to haul each 1000 pounds of truck.
1¢ 1¢ 1¢ 1¢
And only .6 of a cent to haul each 1000 pounds of load.
6
10
KEEP YOUR TRUCKS FULLY LOADED

IOWA R. R. COMMISSION SEEKS BUS REGULATION

Des Moines, Ia., June 12.—The Iowa state railroad commission has submitted brief to the Interstate Commerce Commission urging regulation of interstate motor transportation, the brief expressing beliefs that if the Federal Commission were granted authority by Congress to regulate interstate buses and trucks it would do so in co-operation with the state commissions, making the regulation "not in theory only but in actual practice."

The state commission explained that it is not engaged in any controversy between rail and highway carriers, but added, "we are in favor of interstate motor carrier regulation." J. H. Henderson, counsel, and Stephen Robinson, assistant, prepared the brief in connection with the report the Interstate Commerce Commission will make to Congress as to whether additional bus and truck legislation is needed.

S. A. E. Members Gather For Summer Meeting

(Continued from Page 8)

Aviation Corporation, will preside at the semi-annual business meeting to be held in the evening.

The aircraft session will also be held in the evening, at which the Hon. David S. Ingalls, assistant secretary of the navy for aeronautics, will talk on "Flying With the Navy." This will constitute a resume of the navy and naval aviation activities and will be illustrated by motion pictures of recent maneuvers.

Morning and evening technical sessions will be held on Thursday, and in the afternoon the members will be given the opportunity of witnessing aviation demonstrations. The morning session will be devoted to aircraft engine, with Arthur Nutt, Curtiss Aeroplane and Motor Corporation, presiding, and a chassis session, at which E. S. Marks, H. H. Franklin Mfg. Company, will preside. At the aircraft engine meeting a paper on "Air-Cooled Cylinder-Head Design" will be presented by Roland Chilton, consulting engineer Wright Aeronautical Corporation. This paper discusses the major requirements of good cooling, and touches on fuel and power rating, head temperatures and power rating, cooling and air flow, cowling, cylinder-head design, exhaust systems, head temperatures, cylinder barrels and valve cooling. The author points out that head temperatures are a basic index of operating conditions, and emphasizes the importance of operating aircraft engines with due regard to cylinder-head temperatures instead of oil temperatures.

A. T. Colwell, chief engineer Thompson Products, Inc., in his paper, "Recent Developments in Poppet Valves," brings out the developments in engines which have resulted in increased speed, mean effective pressure and piston displacements which have made valve conditions more difficult. Various types of valves and valve-cooling methods are discussed in this paper.

"The Tire Factor in Automobile Riding Quality," by R. W. Brown, Firestone Tire and Rubber Company; "Road Tests With the New Wabblemeter," by Dr. F. A. Moss, George Washington University; "Some Observations on Riding Qualities," by Dr. Ammon Swope and Prof. H. M. Jacklin, Purdue University, and "Instrumentation as a Means for Co-ordinating Chassis and Body Design," by A. F. Denham, Automotive Industries, will feature the chassis session.

In discussing the tire factor, Mr. Brown outlines methods for measuring characteristics of tires which affect riding qualities, and presents typical curves showing the rate of deflection and contact area in their relation to tire size. Tire and spring interrelated effects, co-ordination of service and laboratory tests and the influence of present driving conditions on tire design, as well as the influence of tire design on riding quality and service performance, are discussed.

The paper discussing the wabblemeter represents the beginning of a program to co-ordinate the fatigue results as shown by the instrument with a limited measurement of the road behavior of the vehicle. The Swope-Jacklin paper presents observations on drivers of cars during Indianapolis Speedway runs, evaluation of fore and aft accelerations in modern automobiles, as well as observations on the effect of vertical vibration of stated amplitudes and frequencies on men and women of various ages and weights. Mr. Denham's paper discusses the body chassis problems and instruments and methods used to solve them.

In the evening the General Production Session is scheduled with E. K. Wenerlund, General Motors Corporation, presiding. H. L. Horning, Waukesha Motor Company, will present "Cost to Industry of Labor Turnover," an address which has for its theme the basis that indirect and intangible results of labor turnover are more important than immeasurable costs and that stability to industry and steady employment are the problems facing industry in the future. The social feature of the day will be the grand ball, which is to be held at 10.30 p. m. in the ballroom of the Greenbrier.

The morning sessions on Friday conclude the technical meetings with the session on engines, at which G. C. Brown, Bohn Aluminum and Brass Corporation, will preside. The papers to be presented are: "Oil Control in the Engine," by H. C. Mougey, General Motors Research Laboratories; "Winter Starting Tests," by P. J. Kent, Chrysler Corporation, and "Reduction of Fan Noise and Fan Power," by A. D. Gardner, Automotive Fan and Bearing Company. Mr. Mougey in his paper states that the problem of oil consumption must be solved before the problems of winter starting and winter lubrication can be solved, because light oils used for winter lubrication give poor oil consumption results. Factors affecting oil consumption are enumerated and discussed in detail, and various methods of overcoming the difficulties encountered are presented. The importance of the necessity for serious study of winter starting requirements, Mr. Kent points out in his paper, is emphasized by the records of Automobile Club, which show that a high percentage of its calls for service originate on account of failure to start, particularly in winter. The author states that successful low-temperature starting should be accomplished, as far as possible, without the exercise of skill or special knowledge on the part of the operator. Various tests for determining starting performance at low temperatures and the method of interpreting the results are described.

The reduction of fan noise and the power requirements for driving fans have long presented problems to the automotive designer. Mr. Gardner presents new data on performance characteristic of cooling fans with respect to these features.

After dinner, special trains will leave for Detroit and Cleveland and the East.

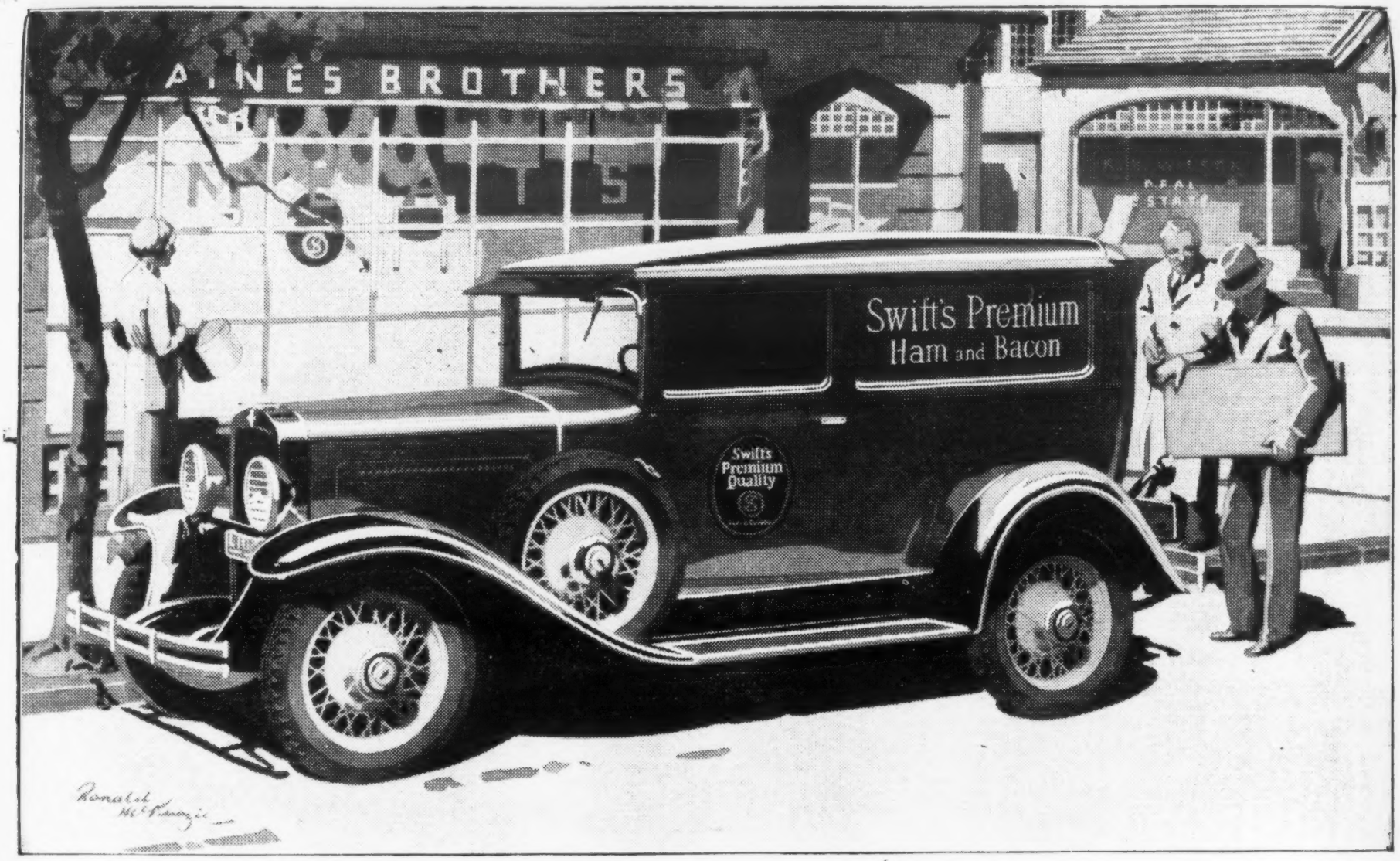
60 HUDSON COUNTY TRUCK FLEETS SHOW BEST SAFETY RECORD

Jersey City, N. J., June 12.—The first combined report of the accident experience of commercial vehicles in various parts of the country, which has just been prepared by the National Safety Council, and which includes the records of sixty fleets in Hudson county, shows a creditable record for the approximately 1,000 commercial drivers enrolled in the interfleet contest of Hudson County Safety Council.

The report, which has just been released by the local Safety Council to its reporting fleets, is for the calendar year 1930. According to the Safety Council, the sixty fleets rolled up a total of 2,459,153 vehicle hours at the rate of 22.49 accidents per 100,000 vehicle hours. In the combined report issued by the National Council the 12,863 commercial trucks operated 33,981,000 vehicle hours at a rate of 23.61 accidents per 100,000 vehicle hours. The rate of the Hudson county drivers was more than a point less than the average throughout the country.

Hudson county also produced five leaders among the fourteen classified groups. The winners were: Petroleum Products group, Vacuum Oil Company, Bayonne Ice and Coal Mountain Ice Company, Jersey City Laundries, R. H. H. Steel Laundry Company, Jersey City Lumber and Building Materials, Montgomery Plumbing Supply Company, Jersey City Transfer, Freighting and Trucking, Edward F. Clark, Bayonne.

National Safety Council has for a number of years reported the combined accident experience of its several thousand industrial members, thus affording the individual industrial plant an opportunity to compare its records with others in the same line of business. This opportunity is now for the first time afforded to fleet owners, who may thus determine how good or how bad their record is as compared with the record of a great number of other fleets in similar lines of business in various parts of the country.



The New Chevrolet Sedan Delivery, $575

Over 400 prominent fleet operators use Chevrolet Six equipment

MORE and more of the leading business firms of America are turning to the Chevrolet dealer for their fleet equipment. And with a remarkably complete line of commercial cars and trucks, Chevrolet is enabling its dealers to meet every demand for economical haulage. The names of a few of the prominent fleet operators who use the Chevrolet Six are given here. They indicate the type and caliber of business that nowadays is coming to the Chevrolet dealer.

Allied Mills Incorporated
Amerada Petroleum Corporation
American Gas & Electric Company
American Water Works & Electric Company, Inc.
Anheuser-Busch Incorporated
Armour and Company
Armstrong Cork Company
Associated Telephone Utilities Co.
The Borden Company
Byllesby Engineering & Management Corporation
The Celotex Company
The Cities Service Organization
Colgate-Palmolive-Peet Company
The Commonwealth & Southern Corporation
Crane Company
DeLaval Separator Company
General Outdoor Advertising Company, Incorporated
General Electric Company
The Goodyear Tire & Rubber Company, Inc.
Kelly-Springfield Tire Company
P. Lorillard Company, Incorporated
Middle West Utilities System
Missouri State Highway Department
Pillsbury Flour Mills Company
Portland Cement Association
The Pure Oil Company
Shell Petroleum Corporation
Sinclair Refining Company
Skelly Oil Company
Standard Brands Incorporated
Standard Oil Company of California
Standard Oil Company of Indiana
Standard Oil Co. of Nebraska
Standard Oil Co. of New York
Stone & Webster Engineering Corporation
Sun Oil Company
Swift & Company
United Biscuit Co. of America
United Light & Power Company
United States Rubber Company
United States Tobacco Company
Western Electric Company, Inc.
Westinghouse Electric & Mfg. Co.
Wilson & Co., Inc.
The Youngstown Sheet & Tube Co.

Chevrolet passenger car prices range from $475 to $650. Chevrolet truck chassis are priced from $355 to $590. All prices f. o. b. Flint, Michigan. Special equipment extra. Product of General Motors. Low delivered prices and easy terms. Chevrolet Motor Company, Detroit, Michigan.

NEW CHEVROLET SIX

The Great American Value

TECHNOLOGY DEPT.

First Copy

A National Newspaper for Every Branch of the Industry

EXTRA EDITION

Automotive Daily News

CARS · SHOP EQUIPMENT · TRUCKS · AVIATION · PARTS · ACCESSORIES · TIRES

Vol. 11. No. 1491. Entered as second-class matter Aug. 27, 1925, Post Office, N. Y., N. Y., Under Act of March 3, 1879 NEW YORK, MONDAY, JUNE 15, 1931 5 Cents, $12 Per Year

Col. Ayres Sees Business Prospects Clearly More Hopeful; Cites Six Reasons

Economist Asserts Replacement Demand Becoming Effective Force; Says Farm Outlook Good and Conditions Abroad Improving

CLEVELAND, June 13.—Col. Leonard P. Ayres, vice-president of the Cleveland Trust Company, economist and business forecaster, takes pains to look upon the bright side of the picture in his mid-month business review, issued by the bank. Among other things, he says:

That business sentiment has made a triple bottom in this depression, which ought to be enough, even in a major depression.

That the agricultural outlook is exceptionally good in nearly all parts of the country.

That replacement demand is at last becoming an effective force in bringing about increases in production of some important classes of manufactured goods.

That the bank's business activity index shows considerable recovery already has been attained.

That business conditions abroad are showing signs of improvement.

Col. Ayres makes no predictions, however, limiting his remarks chiefly to observations on facts and figures. He does not discuss the railroads. He shows that steel production has dropped very sharply and that prices are extremely low. He observes that commitments of most manufacturers of automobiles for materials in June show moderate reductions from those of April. He indicates, in fact, that the basic industries are not now going forward very rapidly.

"In the past," says this national authority on business trends, "the recoveries from business depressions have often been ushered in by sustained increases in the volume of building construction, and by greater outputs of industrial and agricultural equipment. It now seems likely that in the present period sustained increases in the production of consumption goods (such as shoes, underwear, automobile tires and cotton cloth) will precede definite recoveries in the output of the

(Continued on Page 3)

M'DONALD INDORSES MOVE TO ROUTE U. S. ROADS AROUND CITIES

CHICAGO, June 13.—Speaking before the executive committee of the Association of State Highway Officials at the Stevens Hotel, Thomas H. McDonald, director of the United States Bureau of Public Roads, indorsed the movement to route through traffic away from the business sections of large cities by means of changing the U. S. road markers.

"Cities all over the country are beginning to realize that through traffic is a detriment to business property as well as residential property, generally speaking;" declared Mr. McDonald. "A few years ago communities were petitioning to get federal routes through the main streets of their cities, and many now regret their success.

"In going on record as favoring the principle of circumvention, members of the executive committee of the Association of State Highway Officials believe in giving preference to the most direct routes and in rejecting attempts to divert traffic for the selfish benefit of some hotel group or other commercial enterprise catering to tourists.

"The attention we are giving to the problem of cities in handling through traffic is typical of the general trend throughout the country in highway administration. The nation has made progress in estab-

(Continued on Page 3)

S.A.E. Delegates Arrive Early, Anticipating Liveliest Summer Meeting With Full Attendance

Weather Conditions at White Sulphur Springs Ideal For Out-of-Door Programs; Important Discussion Are Expected

By WILLIAM C. CALLAHAN
News Editor

WHITE SULPHUR SPRINGS, W. Va., June 13.—Anticipating a livelier if not larger meeting from the standpoint of attendance, members of the Society of Automotive Engineers began to arrive at the Greenbrier Hotel here from all points of the country early on Saturday morning.

In spite of the fact that the meeting was not scheduled to get under way before Sunday, more than fifty members and their friends were registered at the Greenbrier by Saturday noon.

Weather conditions were ideal, and held promises for the success of all out-of-doors programs scheduled for the week. This, coupled with an exceptionally interesting and educative technical profram, should make this meeting stand out as one o fthe banner meetings in the history of the society.

In addition to the scheduled programs, early arrivals are anticipating an extensive discussion of the present economic situation at the present time and the engineer's place in the economic scheme of the country.

In the corridors of the Greenbrier Hotel, which is the headquarters of the society for the meeting one already begins to catch bits of conversation revolving around gears, alloys, fuels, torque, stresses and what have you in an engineering way.

J. A. C. Warner, general manager of the society got in this morning, and, in spite of a warm train ride, brought his customary infectious smile. Miss McCormick has been here since Wednesday completing the arrangements for handling between 500 and 600 engineers, to say

(Continued on Page 4)

ADDITIONAL S. A. E. DELEGATES REGISTER AT SUMMER MEETING

WHITE SULPHUR SPRINGS, W. Va., June 13.—Since the list of members of the S. A. E. and their guests, who are to be in attendance here during the annual meeting next week, Miss McCormick has compiled a further list of late reservations. This list, which, with the one already published in Automotive Daily News, completes the roster of those present for the opening session of the 1931 summer meeting. This additional list is as follows:—

Mr. and Mrs. Donald Alexander, E. G. Budd Manufacturing Company; Mr. and Mrs. A. B. Boehm; Mr. and Mrs. D. M. Borden, New York city; William Fairhurst, General Motors Laboratories; David Ingalls and W. L. Jenkins, Young & Rubican, Inc.; R. F. Jones, Russell Manufacturing Company; W. J. Leaden, William H. Oldacre and J. M. Orr, Equitable Auto Company; W. T. Palmer, Middletown, Conn.; S. Ward and Henry F. Woods, Jr., Young & Rubican, Inc.

Mr. and Mrs. Furber I. Marshall, Marshall Asbestos Company; Vincent Bendix, president, Bendix Corporation; John R. Cautley, Airplane Wheel Brake Division, Bendix Brake Company; Mr. and Mrs. Malcolm Ferguson, Eclipse Machine Company; Mr. and Mrs. Stanley Whitworth. Bendix Aviation; Mr. and Mrs. M. P Whitney, Eclipse Machine; Mr. and Mrs. D. K. Moore, Bendix Brake; Mr. and Mrs. Charles Colvin, Pioneer Instrument.

Mr. and Mrs. Don R. Scott, Hydraulic Brake Company; Mr. and Mrs. W. L. McGrath, Bendix Aviation; Charles Marcus, Bendix Aviation; V. W. Kliesrath, Bragg Kliesrath; H. A. Gossner, Bendix Aviation; H. L. Sherlock, S. Johnson, Bendix Westinghouse Automotive Air Brake; J. R. Bartholomew, Bendix Brake; A. C. Chambers, Bendix Brake; W. A. Frazer; Eclipse Machine; J. C. Ferguson, Eclipse

(Continued on Page 4)

TRUCK INTERESTS FACE SERIOUS RESTRICTIONS IN ILLINOIS LEGISLATION

CHICAGO, June 13.—Motor truck interests in Chicago and throughout the state today found themselves facing the threat of adverse legislation through passage of a bill in the Illinois House of Representatives imposing serious restrictions on the length and weight of trucks and buses.

If the bill in its present form goes through the senate and is signed by Gov. Emmerson, it will limit the length of any vehicle or combination of tractor and trailer to thirty-five feet. It also provides that until July 1, 1935, the length of vehicles combined with trailers shall not exceed sixty-five feet, and that after that date the length of such combinations shall be limited to forty feet.

On the subject of weight, the bill provides that the maximum gross to be permitted on the road surface through any axle of any vehicle shall not exceed 16,000 pounds; that the gross weight of vehicle and load for four-wheel types shall not exceed 24,000 pounds, and that the gross weight of six-wheeled vehicle

(Continued on Page 4)

Four New Nash Series Due During Latter Part of June

Kenosha, Wis., June 13.—It is understood here that during the latter part of June Nash Motors will announce four new series of Nash cars. This report is borne out by production activity at the plant here and also in Racine and Milwaukee. Production has been stepped up to a high rate to provide floor plans and preliminary shipments to dealers throughout the country.

From authoritative sources it has been learned that the four new Nash series will embody a very drfinite development toward comfort and luxury. It is stated that many new features will be found on the new models, including new and snappy body lines. The Nash engineers have devoted their efforts to increasing performance, driving control and comfort and to this end have introduced a great many new ideas in chassis and body design and construction.

GENERAL MOTORS NET EARNINGS WILL COVER FIRST HALF DIVIDENDS

DETROIT, June 13.—Net earnings of the General Motors Corporation for the second quarter of the year may approximate the figures reported for the like period of 1930, or $1.17 a share on the 43,500,000 common shares, according to estimates in financial circles yesterday.

Should net profits approximate this amount, the results for the half year, adding in the 61 cents a share net reported for the first quarter, would more than cover dividend re-

(Continued on Page 3)

FOR quick dispatch of S. A. E. news this week, see

William C. Callahan

news editor of Automotive Daily News, who will be at the Greenbriar from June 13 to June 19.

News received in New York by 11 o'clock in the morning will appear in the issue of this paper distributed next morning at White Sulphur Springs. If you have a news item of any kind, see Mr. Callahan. Remember the difference in daylight saving time.

Sixteen States and D. C. Show May Sales 4% Below April

NEW YORK, June 13.—Sales returns have just been received by Automotive Daily News for two new states, bringing the total now in hand up to sixteen states and the District of Columbia. The total passenger car sales in May, 1931, for these sixteen states and the District were 55,413, which compares with 57,637 in April and with 82,283 in May, 1930.

From these figures we find that passenger car sales in May are running just a shade under 4 per cent. below the levels maintained in April. Without hunting rainbows, we can say that this is an excellent showing. As compared with May, 1930, this year's figures are off about 32 per cent.

Three companies made a record, in that during May, 1931, they registered more pasenger cars than they did in the same month last year. Auburn registered 900 units against 245 in May, 1930; Cadillac registered 212 against 204 and Pontiac registered 2,596 against 2,305. It is interesting to note 149 De Vaux cars registered in these sixteen states and the District. This is De Vaux's first appearance in force in the sales returns, the car having been in production only since March.

Chevrolet registered 17,861 in these states in May, against 20,738 in May, 1930.

Ford in May this year registered 16,730, as compared with 33,755 units during May, 1930.

The states referred to above, from which sales returns have been received, are as follows: Arkansas, Delaware, Idaho, Illinois, Maryland, Minnesota, Montana, New Hampshire, North Dakota, Rhode Island, South Carolina, South Dakota, Utah, Virginia, West Virginia, Wisconsin and the District of Columbia.